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Ala Arg Thr Phe Asp Lys Lys Gly Phe His Val Ile Ala Ala Cys
Leu Thr Glu Ser Gly Ser Thr Ala Leu Lys Ala Glu Thr Ser Glu
Arg Leu Arg Thr Val Leu Leu Asp Val Thr Asp Pro Glu Asn Val
Lys Arg Thr Ala Gln Trp Val Lys Asn Gln Val Gly Glu Lys Gly
Leu Trp Gly Leu Ile Asn Asn Ala Gly Val Pro Gly Val Leu Ala
                 110
 Pro Thr Asp Trp Leu Thr Leu Glu Asp Tyr Arg Glu Pro Ile Glu
                 125
Val Asn Leu Phe Gly Leu Ile Ser Val Thr Leu Asn Met Leu Pro
                                                           150
                 140
Leu Val Lys Lys Ala Gln Gly Arg Val Ile Asn Val Ser Ser Val
                 155
Gly Gly Arg Leu Ala Ile Val Gly Gly Gly Tyr Thr Pro Ser Lys
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                                                           180
Tyr Ala Val Glu Gly Phe Asn Asp Ser Leu Arg Arg Asp Met Lys
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185

190

195

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Ala Phe Gly Val His Val Ser Cys Ile Glu Pro Gly Leu Phe Lys
Thr Asn Leu Ala Asp Pro Val Lys Val Ile Glu Lys Lys Leu Ala
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Ile Trp Glu Gln Leu Ser Pro Asp Ile Lys Gln Gln Tyr Gly Glu
Gly Tyr Ile Glu Lys Ser Leu Asp Lys Leu Lys Gly Asn Lys Ser
                                                         255
Tyr Val Asn Met Asp Leu Ser Pro Val Val Glu Cys Met Asp His
                                                        270
                260
Ala Leu Thr Ser Leu Phe Pro Lys Thr His Tyr Ala Ala Gly Lys
                275
                                    280
                                                         285
Asp Ala Lys Ile Phe Trp Ile Pro Leu Ser His Met Pro Ala Ala
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Leu Gln Asp Phe Leu Leu Lys Gln Lys Ala Glu Leu Ala Asn
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Pro Lys Ala Val

<210> 11

<211> 2720

<212> DNA

<213> Homo sapines

<400> 11

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gagcggtgat cgagcctgag cagggcaccg agctcccttc aagaagagca 700 gaagtgccca ccaagcctcc cctgccaccg gccaggacac agggcacacc 750 agtgcatctg aactatcgcc agaagggcgt gattgacgtc ttcctgcatg 800 catggaaagg ataccgcaag tttgcatggg gccatgacga gctgaagcct 850 gtgtccaggt ccttcagtga gtggtttggc ctcggtctca cactgatcga 900 cgcgctggac accatgtgga tcttgggtct gaggaaagaa tttgaggaag 950 ccaggaagtg ggtgtcgaag aagttacact ttgaaaagga cgtggacgtc 1000 aacctgtttg agagcacgat ccgcatcctg ggggggctcc tgagtgccta 1050 ccacctgtct ggggacagcc tcttcctgag gaaagctgag gattttggaa 1100 atcggctaat gcctgccttc agaacaccat ccaagattcc ttactcggat 1150 gtgaacatcg gtactggagt tgcccacccg ccacggtgga cctccgacag 1200 cactgtggcc gaggtgacca gcattcagct ggagttccgg gagctctccc 1250 gtctcacagg ggataagaag tttcaggagg cagtggagaa ggtgacacag 1300 cacatccacg gcctgtctgg gaagaaggat gggctggtgc ccatgttcat 1350 caatacccac agtggcctct tcacccacct gggcgtattc acgctgggcg 1400 ccagggccga cagctactat gagtacctgc tgaagcagtg gatccagggc 1450 gggaagcagg agacacagct gctggaagac tacgtggaag ccatcgaggg 1500 tgtcagaacg cacctgctgc ggcactccga gcccagtaag ctcacctttg 1550 tgggggagct tgcccacggc cgcttcagtg ccaagatgga ccacctggtg 1600 tgcttcctgc cagggacgct ggctctgggc gtctaccacg gcctgcccgc 1650 cagccacatg gagctggccc aggagctcat ggagacttgt taccagatga 1700 accggcagat ggagacgggg ctgagtcccg agatcgtgca cttcaacctt 1750 tacccccagc cgggccgtcg ggacgtggag gtcaagccag cagacaggca 1800 caacctgctg cggccagaga ccgtggagag cctgttctac ctgtaccgcg 1850 tcacagggga ccgcaaatac caggactggg gctgggagat tctgcagagc 1900 ttcagccgat tcacacgggt cccctcgggt ggctattctt ccatcaacaa 1950 tgtccaggat cctcagaagc ccgagcctag ggacaagatg gagagcttct 2000 tcctggggga gacgctcaag tatctgttct tgctcttctc cgatgaccca 2050 aacctgctca gcctggacgc ctacgtgttc aacaccgaag cccaccctct 2100

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<211> 699

<212> PRT

<213> Homo sapiens

<220>

<221> TRANSMEM

<222> 21-40 and 84-105

<223> Transmembrane Domain (type II)

<400> 12

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Gln Ser Asp Phe Leu Thr Pro Pro Val Gly Gly Ala Pro Trp Ala 20 25 30

Val Ala Thr Thr Val Val Met Tyr Pro Pro Pro Pro Pro Pro Pro 35 40 45

His Arg Asp Phe Ile Ser Val Thr Leu Ser Phe Gly Glu Ser Tyr 50 55 60

Asp Asn Ser Lys Ser Trp Arg Arg Arg Ser Cys Trp Arg Lys Trp 65 70 75

Lys Gln Leu Ser Arg Leu Gln Arg Asn Met Ile Leu Phe Leu Leu 80 85 90

Ala Phe Leu Leu Phe Cys Gly Leu Leu Phe Tyr Ile Asn Leu Ala 95 100 105 Asp His Trp Lys Ala Leu Ala Phe Arg Leu Glu Glu Glu Gln Lys Met Arg Pro Glu Ile Ala Gly Leu Lys Pro Ala Asn Pro Pro Val Leu Pro Ala Pro Gln Lys Ala Asp Thr Asp Pro Glu Asn Leu Pro Glu Ile Ser Ser Gln Lys Thr Gln Arg His Ile Gln Arg Gly Pro Pro His Leu Gln Ile Arg Pro Pro Ser Gln Asp Leu Lys Asp Gly Thr Gln Glu Glu Ala Thr Lys Arg Gln Glu Ala Pro Val Asp Pro Arg Pro Glu Gly Asp Pro Gln Arg Thr Val Ile Ser Trp Arg Gly Ala Val Ile Glu Pro Glu Gln Gly Thr Glu Leu Pro Ser Arg Arg Ala Glu Val Pro Thr Lys Pro Pro Leu Pro Pro Ala Arg Thr Gln 230 Gly Thr Pro Val His Leu Asn Tyr Arg Gln Lys Gly Val Ile Asp Val Phe Leu His Ala Trp Lys Gly Tyr Arg Lys Phe Ala Trp Gly His Asp Glu Leu Lys Pro Val Ser Arg Ser Phe Ser Glu Trp Phe Gly Leu Gly Leu Thr Leu Ile Asp Ala Leu Asp Thr Met Trp Ile Leu Gly Leu Arg Lys Glu Phe Glu Glu Ala Arg Lys Trp Val Ser Lys Lys Leu His Phe Glu Lys Asp Val Asp Val Asn Leu Phe Glu Ser Thr Ile Arg Ile Leu Gly Gly Leu Leu Ser Ala Tyr His Leu Ser Gly Asp Ser Leu Phe Leu Arg Lys Ala Glu Asp Phe Gly Asn 350 Arg Leu Met Pro Ala Phe Arg Thr Pro Ser Lys Ile Pro Tyr Ser Asp Val Asn Ile Gly Thr Gly Val Ala His Pro Pro Arg Trp Thr 390 Ser Asp Ser Thr Val Ala Glu Val Thr Ser Ile Gln Leu Glu Phe

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Arg	Glu	Leu	Ser	Arg 410	Leu	Thr	Gly	Asp	Lys 415	Lys	Phe	Gln	Glu	Ala 420
Val	Glu	Lys	Val	Thr 425	Gln	His	Ile	His	Gly 430	Leu	Ser	Gly	Lys	Lys 435
Asp	Gly	Leu	Val	Pro 440	Met	Phe	Ile	Asn	Thr 445	His	Ser	Gly	Leu	Phe 450
Thr	His	Leu	Gly	Val 455	Phe	Thr	Leu	Gly	Ala 460	Arg	Ala	Asp	Ser	Tyr 465
Tyr	Glu	Tyr	Leu	Leu 470	Lys	Gln	Trp	Ile	Gln 475	Gly	Gly	Lys	Gln	Glu 480
Thr	Gln	Leu	Leu	Glu 485	Asp	Tyr	Val	Glu	Ala 490	Ile	Glu	Gly	Val	Arg 495
Thr	His	Leu	Leu	Arg 500	His	Ser	Glu	Pro	Ser 505	Lys	Leu	Thr	Phe	Val 510
Gly	Glu	Leu	Ala	His 515	Gly	Arg	Phe	Ser	Ala 520	Lys	Met	Asp	His	Leu 525
Val	Cys	Phe	Leu	Pro 530	Gly	Thr	Leu	Ala	Leu 535	Gly	Val	Tyr	His	Gly 540
Leu	Pro	Ala	Ser	His 545	Met	Glu	Leu	Ala	Gln 550	Glu	Leu	Met	Glu	Thr 555
Cys	Tyr	Gln	Met	Asn 560	Arg	Gln	Met	Glu	Thr 565	Gly	Leu	Ser	Pro	Glu 570
Ile	Val	His	Phe	Asn 575	Leu	Tyr	Pro	Gln	Pro 580	Gly	Arg	Arg	Asp	Val 585
Glu	Val	Lys	Pro	Ala 590	Asp	Arg	His	Asn	Leu 595	Leu	Arg	Pro	Glu	Thr 600
Val	Glu	Ser	Leu	Phe 605	Tyr	Leu	Tyr	Arg	Val 610	Thr	Gly	Asp	Arg	Lys 615
Tyr	Gln	Asp	Trp	Gly 620	Trp	Glu	Ile	Leu	Gln 625	Ser	Phe	Ser	Arg	Phe 630
Thr	Arg	Val	Pro	Ser 635	Gly	Gly	Tyr	Ser	Ser 640	Ile	Asn	Asn	Val	Gln 645
Asp	Pro	Gln	Lys	Pro 650	Glu	Pro	Arg	Asp	Lys 655	Met	Glu	Ser	Phe	Phe 660
Leu	Gly	Glu	Thr	Leu 665	Lys	Tyr	Leu	Phe	Leu 670	Leu	Phe	Ser	Asp	Asp 675
Pro	Asn	Leu	Leu	Ser 680	Leu	Asp	Ala	Tyr	Val 685	Phe	Asn	Thr	Glu	Ala 690

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His Pro Leu Pro Ile Trp Thr Pro Ala
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<211> 24
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<213> Artificial
<220>
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<222> 1-24
<223> Synthetic construct.
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<222> 1-24
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<222> 1-44
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<210> 16
<211> 1524
<212> DNA
<213> Homo sapiens
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 cccatgcgcc gccgcctctc cgcacgatgt tcccctcgcg gaggaaagcg 100
 gcgcagctgc cctgggagga cggcaggtcc gggttgctct ccggcggcct 150
 ccctcggaag tgttccgtct tccacctgtt cgtggcctgc ctctcgctgg 200
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gcttcttctc cctactctgg ctgcagctca gctgctctgg ggacgtggcc 250

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cgggcagtca ggggacaagg gcaggagacc tcgggccctc cccgtgcctg 300
cccccagag ccgcccctg agcactggga agaagacgca tcctggggcc 350
cccaccgcct ggcagtgctg gtgcccttcc gcgaacgctt cgaggagctc 400
ctggtcttcg tgccccacat gcgccgcttc ctgagcagga agaagatccg 450
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aaaaaaaaaa aaaaaaaaa aaaa 1524
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<220>

<210> 17

<211> 327

<212> PRT

<213> Homo sapiens

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<222> 1-4\overline{2}
<223> Signal peptide.
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<221> misc feature
<222> 19-25,65-71,247-253,285-291,303-310
<223> N-myristoylation site.
<220>
<221> misc feature
<222> 27-31
<223> cAMP- and cGMP-dependent protein kinase phosphorylation site.
<220>
<221> TRANSMEM
<222> 29-49
<223> Transmembrane domain (type II).
<220>
<221> misc feature
<222> 154-158
<223> N-glycosylation site.
<220>
<221> misc feature
<222> 226-233
<223> Tyrosine kinase phosphorylation site.
<400> 17
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 Gly Arg Ser Gly Leu Leu Ser Gly Gly Leu Pro Arg Lys Cys Ser
 Val Phe His Leu Phe Val Ala Cys Leu Ser Leu Gly Phe Phe Ser
 Leu Leu Trp Leu Gln Leu Ser Cys Ser Gly Asp Val Ala Arg Ala
 Val Arg Gly Gln Gly Gln Glu Thr Ser Gly Pro Pro Arg Ala Cys
 Pro Pro Glu Pro Pro Pro Glu His Trp Glu Glu Asp Ala Ser Trp
 Gly Pro His Arg Leu Ala Val Leu Val Pro Phe Arg Glu Arg Phe
                                                          105
 Glu Glu Leu Val Phe Val Pro His Met Arg Arg Phe Leu Ser
                                      115
                 110
 Arg Lys Lys Ile Arg His His Ile Tyr Val Leu Asn Gln Val Asp
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                 125
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His Phe Arg Phe Asn Arg Ala Ala Leu Ile Asn Val Gly Phe Leu

				140					145					150
Glu	Ser	Ser	Asn	Ser 155	Thr	Asp	Tyr	Ile	Ala 160	Met	His	Asp	Val	Asp 165
Leu	Leu	Pro	Leu	Asn 170	Glu	Glu	Leu	Asp	Tyr 175	Gly	Phe	Pro	Glu	Ala 180
Gly	Pro	Phe	His	Val 185	Ala	Ser	Pro	Glu	Leu 190	His	Pro	Leu	Tyr	His 195
Tyr	Lys	Thr	Tyr	Val 200	Gly	Gly	Ile	Leu	Leu 205	Leu	Ser	Lys	Gln	His 210
Tyr	Arg	Leu	Суз	Asn 215	Gly	Met	Ser	Asn	Arg 220	Phe	Trp	Gly	Trp	Gly 225
Arg	Glu	Asp	Asp	Glu 230	Phe	Tyr	Arg	Arg	Ile 235	Lys	Gly	Ala	Gly	Leu 240
Gln	Leu	Phe	Arg	Pro 245	Ser	Gly	Ile	Thr	Thr 250	Gly	Tyr	Lys	Thr	Phe 255
Arg	His	Leu	His	Asp 260	Pro	Ala	Trp	Arg	Lys 265	Arg	Asp	Gln	Lys	Arg 270
Ile	Ala	Ala	Gln	Lys 275	Gln	Glu	Gln	Phe	Lys 280	Val	Asp	Arg	Glu	Gly 285
Gly	Leu	Asn	Thr	Val 290	Lys	Tyr	His	Val	Ala 295	Ser	Arg	Thr	Ala	Leu 300
Ser	Val	Gly	Gly	Ala 305	Pro	Cys	Thr	Val	Leu 310	Asn	Ile	Met	Leu	Asp 315
Cys	Asp	Lys	Thr	Ala 320	Thr	Pro	Trp	Cys	Thr 325	Phe	Ser			
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<220> <221> Artificial Sequence <222> 1-23 <223> Synthetic construct.														
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<222> 3-18

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<220>
<221> Artificial Sequence
<222> 1-46
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<211> 494
<212> DNA
<213> Homo sapiens
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<212> PRT
<213> Homo sapiens
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<221> sig_peptide
<222> 1-15
<223> Signal peptide.
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<221> misc_feature
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<223> Growth factor and cytokines receptors family.

<400> 22

Met Leu Leu Leu Thr Leu Leu Leu Leu Leu Leu Leu Leu Lys Gly
1 5 10 15

Ser Cys Leu Glu Trp Gly Leu Val Gly Ala Gln Lys Val Ser Ser 20 25 30

Ala Thr Asp Ala Pro Ile Arg Asp Trp Ala Phe Pro Pro Ser 35 40 45

Phe Leu Cys Leu Leu Pro His Arg Pro Ala Met Thr Cys Ser Gln 50 55 60

Ala Gln Pro Arg Gly Glu Gly Glu Lys Val Gly Asp Gly
65 70

<210> 23

<211> 2883

<212> DNA

<213> Homo sapiens

<400> 23

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<400> 24

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Leu Leu Pro Leu Ser Leu Leu Ala Leu Leu Ala Leu Leu Gly Gly

Gly Gly Gly Gly Ala Ala Leu Pro Ala Gly Cys Lys His

Asp Gly Arg Pro Arg Gly Ala Gly Arg Ala Ala Gly Ala Ala Glu

Gly Lys Val Val Cys Ser Ser Leu Glu Leu Ala Gln Val Leu Pro

Pro Asp Thr Leu Pro Asn Arg Thr Val Thr Leu Ile Leu Ser Asn 85

Asn Lys Ile Ser Glu Leu Lys Asn Gly Ser Phe Ser Gly Leu Ser Leu Leu Glu Arg Leu Asp Leu Arg Asn Asn Leu Ile Ser Ser Ile Asp Pro Gly Ala Phe Trp Gly Leu Ser Ser Leu Lys Arg Leu Asp 125 Leu Thr Asn Asn Arg Ile Gly Cys Leu Asn Ala Asp Ile Phe Arg 140 Gly Leu Thr Asn Leu Val Arg Leu Asn Leu Ser Gly Asn Leu Phe 155 Ser Ser Leu Ser Gln Gly Thr Phe Asp Tyr Leu Ala Ser Leu Arg 170 Ser Leu Glu Phe Gln Thr Glu Tyr Leu Leu Cys Asp Cys Asn Ile 185 Leu Trp Met His Arg Trp Val Lys Glu Lys Asn Ile Thr Val Arg Asp Thr Arg Cys Val Tyr Pro Lys Ser Leu Gln Ala Gln Pro Val Thr Gly Val Lys Gln Glu Leu Leu Thr Cys Asp Pro Pro Leu Glu Leu Pro Ser Phe Tyr Met Thr Pro Ser His Arg Gln Val Val Phe 255 Glu Gly Asp Ser Leu Pro Phe Gln Cys Met Ala Ser Tyr Ile Asp Gln Asp Met Gln Val Leu Trp Tyr Gln Asp Gly Arg Ile Val Glu 275 Thr Asp Glu Ser Gln Gly Ile Phe Val Glu Lys Asn Met Ile His Asn Cys Ser Leu Ile Ala Ser Ala Leu Thr Ile Ser Asn Ile Gln 305 315 Ala Gly Ser Thr Gly Asn Trp Gly Cys His Val Gln Thr Lys Arg Gly Asn Asn Thr Arg Thr Val Asp Ile Val Val Leu Glu Ser Ser 335 Ala Gln Tyr Cys Pro Pro Glu Arg Val Val Asn Asn Lys Gly Asp Phe Arg Trp Pro Arg Thr Leu Ala Gly Ile Thr Ala Tyr Leu Gln Cys Thr Arg Asn Thr His Gly Ser Gly Ile Tyr Pro Gly Asn Pro

				380					385					390
Gln	Asp	Glu	Arg	Lys 395	Ala	Trp	Arg	Arg	Cys 400	Asp	Arg	Gly	Gly	Phe 405
Trp	Ala	Asp	Asp	Asp 410	Tyr	Ser	Arg	Cys	Gln 415	Tyr	Ala	Asn	Asp	Val 420
Thr	Arg	Val	Leu	Tyr 425	Met	Phe	Asn	Gln	Met 430	Pro	Leu	Asn	Leu	Thr 435
Asn	Ala	Val	Ala	Thr 440	Ala	Arg	Gln	Leu	Leu 445	Ala	Tyr	Thr	Val	Glu 450
Ala	Ala	Asn	Phe	Ser 455	Asp	Lys	Met	Asp	Val 460	Ile	Phe	Val	Ala	Glu 465
Met	Ile	Glu	Lys	Phe 470	Gly	Arg	Phe	Thr	Lys 475	Glu	Glu	Lys	Ser	Lys 480
Glu	Leu	Gly	Asp	Val 485	Met	Val	Asp	Ile	Ala 490	Ser	Asn	Ile	Met	Leu 495
Ala	Asp	Glu	Arg	Val 500	Leu	Trp	Leu	Ala	Gln 505	Arg	Glu	Ala	Lys	Ala 510
Cys	Ser	Arg	Ile	Val 515	Gln	Cys	Leu	Gln	Arg 520	Ile	Ala	Thr	Tyr	Arg 525
Leu	Ala	Gly	Gly	Ala 530	His	Val	Tyr	Ser	Thr 535	Tyr	Ser	Pro	Asn	Ile 540
Ala	Leu	Glu	Ala	Tyr 545	Val	Ile	Lys	Ser	Thr 550	Gly	Phe	Thr	Gly	Met 555
Thr	Cys	Thr	Val	Phe 560	Gln	Lys	Val	Ala	Ala 565	Ser	Asp	Arg	Thr	Gly 570
Leu	Ser	Asp	Tyr	Gly 575	Arg	Arg	Asp	Pro	Glu 580	Gly	Asn	Leu	Asp	Lys 585
Gln	Leu	Ser	Phe	Lys 590	Cys	Asn	Val	Ser	Asn 595	Thr	Phe	Ser	Ser	Leu 600
Ala	Leu	Lys	Val	Cys 605	Tyr	Ile	Leu	Gln	Ser 610	Phe	Lys	Thr	Ile	Tyr 615
Sar														

Ser

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<220>

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<223> Synthetic construct.
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<210> 27
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<222> 1-50
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<212> DNA
<213> Homo sapiens
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 gcagaggctt cgtgacggag ttatcagaga cattgagagg caaattcgga 150
 aaaaagaaaa cattcgtctt ttgggagaac agattatttt gactgagcaa 200
 cttgaagcag aaagagagaa gatgttattg gcaaaaggat ctcaaaaatc 250
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<211> 81

<212> PRT

<213> Homo sapiens

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<223> Signal peptide.

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Thr Ala Ala Thr Val Ala Gly Val His Val Lys Gln Gln Trp Asp
20 25 30

Gln Gln Arg Leu Arg Asp Gly Val Ile Arg Asp Ile Glu Arg Gln 35 40 45

Ile Arg Lys Lys Glu Asn Ile Arg Leu Leu Gly Glu Gln Ile Ile
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Leu Thr Glu Gln Leu Glu Ala Glu Arg Glu Lys Met Leu Leu Ala 65 70 75

Lys Gly Ser Gln Lys Ser 80

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<212> DNA

<213> Homo sapiens

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tccgtggatt cctctgctaa gaccgctgcc atgccagtga cggtaacccg 150
caccaccatc acaaccacca cgacgtcatc ttcgggcctg gggtccccca 200
tgatcgtggg gtcccctcgg gccctgacac agcccctggg tctccttcgc 250
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gggcgcctgg acggggtcca tgggcaactg gtccatgttc acctggtgct 350
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<210> 31

<211> 322

<212> PRT

<213> Homo sapiens

<400> 31

Met Pro Val Thr Val Thr Arg Thr Thr Ile Thr Thr Thr Thr 1 5 10 15

Ser Ser Ser Gly Leu Gly Ser Pro Met Ile Val Gly Ser Pro Arg 20 25 30

Ala Leu Thr Gln Pro Leu Gly Leu Leu Arg Leu Leu Gln Leu Val 35 40 45

Ser Thr Cys Val Ala Phe Ser Leu Val Ala Ser Val Gly Ala Trp
50 55 60

Thr Gly Ser Met Gly Asn Trp Ser Met Phe Thr Trp Cys Phe Cys 65 70 75

Phe Ser Val Thr Leu Ile Ile Leu Ile Val Glu Leu Cys Gly Leu 80 85 90

Gln Ala Arg Phe Pro Leu Ser Trp Arg Asn Phe Pro Ile Thr Phe 95 100 105

Ala Cys Tyr Ala Ala Leu Phe Cys Leu Ser Ala Ser Ile Ile Tyr 110 115 120

Pro Thr Thr Tyr Val Gln Phe Leu Ser His Gly Arg Ser Arg Asp 125 130 135

His Ala Ile Ala Ala Thr Phe Phe Ser Cys Ile Ala Cys Val Ala 140 145 150

Tyr Ala Thr Glu Val Ala Trp Thr Arg Ala Arg Pro Gly Glu Ile 155 160 165

Thr Gly Tyr Met Ala Thr Val Pro Gly Leu Leu Lys Val Leu Glu 170 175 180

Thr Phe Val Ala Cys Ile Ile Phe Ala Phe Ile Ser Asp Pro Asn 185 190 195

Leu Tyr Gln His Gln Pro Ala Leu Glu Trp Cys Val Ala Val Tyr $200 \hspace{1.5cm} 205 \hspace{1.5cm} 210 \hspace{1.5cm}$

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Gly Glu Cys Thr Asn Val Leu Pro Ile Pro Phe Pro Ser Phe Leu
                230
Ser Gly Leu Ala Leu Leu Ser Val Leu Leu Tyr Ala Thr Ala Leu
                                    250
                245
Val Leu Trp Pro Leu Tyr Gln Phe Asp Glu Lys Tyr Gly Gln
                                                         270
                260
Pro Arg Arg Ser Arg Asp Val Ser Cys Ser Arg Ser His Ala Tyr
                                                         285
                275
                                    280
Tyr Val Cys Ala Trp Asp Arg Arg Leu Ala Val Ala Ile Leu Thr
                                                         300
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Ala Ile Asn Leu Leu Ala Tyr Val Ala Asp Leu Val His Ser Ala
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His Leu Val Phe Val Lys Val
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320 <210> 32

<211> 3680 <212> DNA

<213> Homo sapiens

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 tcacctcggc ctcccaaagt gctgggatta caggcatgag ccactgacgc 150
 ctggccagcc tatgcatttt taagaaatta ttctgtatta ggtgctgtgc 200
 taaacattgg gcactacagt gaccaaaaca gactgaattc cccaaagagcc 250
 aaagaccagt gagggagacc aacaagaaac aggaaatgca aaagagacca 300
 ttattactca ctatgactaa gggtcacaaa tggggtacgt tgatggagag 350
 tgatttgtta agagactaca gagggaggac agactaccaa gaggggggcc 400
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 gaaagagcta gccagccatc agaatagtcc agaagagatg gggagcacta 500
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<211> 335

<212> PRT

<213> Homo sapiens

<400> 33

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Phe Gly Thr Val Ser Cys Glu Tyr Met Leu Gly Ser Pro Leu Ser 20 25 30

Ser Leu Ala Gln Val Asn Leu Ser Pro Phe Ser His Pro Lys Val 35 40 45

His Met Asp Pro Asn Tyr Cys His Pro Ser Thr Ser Leu His Leu 50 55 60

Cys Ser Leu Ala Trp Ser Phe Thr Arg Leu Leu His Pro Pro Leu
65 70 75

Ser Pro Gly Ile Ser Gln Val Val Lys Asp His Val Thr Lys Pro 80 85 90

Thr Ala Met Ala Gln Gly Arg Val Ala His Leu Ile Glu Trp Lys 95 100 105

Gly Trp Ser Lys Pro Ser Asp Ser Pro Ala Ala Leu Glu Ser Ala
110 115 120

Phe Ser Ser Tyr Ser Asp Leu Ser Glu Gly Glu Gln Glu Ala Arg
125 130 130

Phe Ala Ala Gly Val Ala Glu Gln Phe Ala Ile Ala Glu Ala Lys 140 145 150

Leu Arg Ala Trp Ser Ser Val Asp Gly Glu Asp Ser Thr Asp Asp 155 160 165

Ser Tyr Asp Glu Asp Phe Ala Gly Gly Met Asp Thr Asp Met Ala 170 175 180

Gly Gln Leu Pro Leu Gly Pro His Leu Gln Asp Leu Phe Thr Gly
185 190 195

His Arg Phe Ser Arg Pro Val Arg Gln Gly Ser Val Glu Pro Glu 200 205 210

Ser Asp Cys Ser Gln Thr Val Ser Pro Asp Thr Leu Cys Ser Ser 215 220 225

Leu Cys Ser Leu Glu Asp Gly Leu Leu Gly Ser Pro Ala Arg Leu 230 235 240

<400> 36

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                 275
Pro Ala Glu Glu Pro Ala Pro Cys Lys Asp Cys Gln Pro Leu
                 290
Cys Pro Pro Leu Thr Gly Ser Trp Glu Arg Gln Arg Gln Ala Ser
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Glu Pro Glu Glu Gln
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 caatctattc ttgccacatc aagggattgt tattccttta aaaaaaaacc 300
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<212> PRT

<213> Homo sapiens

<400> 41

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Ser Leu Leu Ser Gly Ser His Gly Lys Glu Asn Gln Asp Ile Asn 20 25 30

Thr Thr Gln Asn Ile Ala Glu Val Phe Lys Thr Met Glu Asn Lys 35 40 45

Pro Ile Ser Leu Glu Ser Glu Ala Asn Leu Asn Ser Asp Lys Glu
50 55 60

Asn Ile Thr Thr Ser Asn Leu Lys Ala Ser His Ser Pro Pro Leu 65 70 75

Asn Leu Pro Asn Asn Ser His Gly Ile Thr Asp Phe Ser Ser Asn 80 85 90

Ser Ser Ala Glu His Ser Leu Gly Ser Leu Lys Pro Thr Ser Thr 95 100 105

Ile Ser Thr Ser Pro Pro Leu Ile His Ser Phe Val Ser Lys Val 110 115 120

Pro Trp Asn Ala Pro Ile Ala Asp Glu Asp Leu Leu Pro Ile Ser 125 130 135

Ala His Pro Asn Ala Thr Pro Ala Leu Ser Ser Glu Asn Phe Thr 140 145 150

Trp Ser Leu Val Asn Asp Thr Val Lys Thr Pro Asp Asn Ser Ser 155 160 165

Ile Thr Val Ser Ile Leu Ser Ser Glu Pro Thr Ser Pro Ser Val 170 175 180

Thr Pro Leu Ile Val Glu Pro Ser Gly Trp Leu Thr Thr Asn Ser 185 190 195

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Asp Ser Phe Thr Gly Phe Thr Pro Tyr Gln Glu Lys Thr Thr Leu
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Gln Pro Thr Leu Lys Phe Thr Asn Asn Ser Lys Leu Phe Pro Asn
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Thr Ser Asp Pro Gln Lys Glu Asn Arg Asn Thr Gly Ile Val Phe
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Gly Ala Ile Leu Gly Ala Ile Leu Gly Val Ser Leu Leu Thr Leu
                245
Val Gly Tyr Leu Leu Cys Gly Lys Arg Lys Thr Asp Ser Phe Ser
                                                         270
                260
His Arg Arg Leu Tyr Asp Asp Arg Asn Glu Pro Val Leu Arg Leu
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                275
                                     280
Asp Asn Ala Pro Glu Pro Tyr Asp Val Ser Phe Gly Asn Ser Ser
                                                         300
                290
                                     295
Tyr Tyr Asn Pro Thr Leu Asn Asp Ser Ala Met Pro Glu Ser Glu
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Glu Asn Ala Arg Asp Gly Ile Pro Met Asp Asp Ile Pro Pro Leu
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Arg Thr Ser Val

<210> 42

<211> 1594

<212> DNA

<213> Homo sapiens

<400> 42

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<210> 43

<211> 263

<212> PRT

<213> Homo sapiens

<400> 43

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Thr Gln Ile Leu Thr Gly Lys Glu Leu Arg Val Ala Thr Gln Glu
35 40 45

Lys Glu Gly Ser Ser Gly Arg Cys Met Leu Thr Leu Leu Gly Leu

50 55 60

Ser Phe Ile Leu Ala Gly Leu Ile Val Gly Gly Ala Cys Ile Tyr
65 70 75

Lys Tyr Phe Met Pro Lys Ser Thr Ile Tyr Arg Gly Glu Met Cys
80 85 90

Phe Phe Asp Ser Glu Asp Pro Ala Asn Ser Leu Arg Gly Glu 95 100 105

Pro Asn Phe Leu Pro Val Thr Glu Glu Ala Asp Ile Arg Glu Asp 110 115 120

Asp Asn Ile Ala Ile Ile Asp Val Pro Val Pro Ser Phe Ser Asp 125 130 135

Ser Asp Pro Ala Ala Ile Ile His Asp Phe Glu Lys Gly Met Thr 140 145 150

Ala Tyr Leu Asp Leu Leu Gly Asn Cys Tyr Leu Met Pro Leu 155 160 165

Asn Thr Ser Ile Val Met Pro Pro Lys Asn Leu Val Glu Leu Phe 170 175 180

Gly Lys Leu Ala Ser Gly Arg Tyr Leu Pro Gln Thr Tyr Val Val 185 190 195

Leu Gly Ile Phe Ile Tyr Gln Leu Cys Asn Asn Arg Lys Ser Phe 215 220 225

Arg Leu Arg Arg Arg Asp Leu Leu Gly Phe Asn Lys Arg Ala 230 235 240

Ile Asp Lys Cys Trp Lys Ile Arg His Phe Pro Asn Glu Phe Ile 245 250 255

Val Glu Thr Lys Ile Cys Gln Glu 260

<210> 44

<211> 24

<212> DNA

<213> Artificial

<220>

<221> Artificial sequence

<222> 1-24

<223> Synthetic construct.

<400> 44

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<210> 45

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<213> Artificial
<220>
<221> Artificial sequence
<222> 1-20
<223> Synthetic construct.
<400> 45
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<210> 46
<211> 26
<212> DNA
<213> Artificial
<220>
<221> Artificial sequence
<222> 1-26
<223> Synthetic construct.
<400> 46
caggatetee tettgeagte tgeage 26
<210> 47
<211> 28
<212> DNA
<213> Artificial
<220>
<221> Artificial sequence
<222> 1-28
<223> Synthetic construct.
<400> 47
cttctcgaac cacataagtt tgaggcag 28
<210> 48
<211> 25
<212> DNA
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<222> 1-25
<223> Synthetic construct.
<400> 48
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<210> 49
<211> 1969
<212> DNA
<213> Homo sapiens
<400> 49
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<210> 50

<211> 283

<212> PRT

<213> Homo sapiens

<400> 50

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Lys Ala Thr Phe Leu Glu Asp Val Ala Gly Ser Gly Glu Ala Glu

Gly Ser Ser Ala Ser Ser Pro Ser Leu Pro Pro Pro Trp Thr Pro 50 55 60

Ala Leu Ser Pro Thr Ser Met Gly Pro Gln Pro Thr Thr Leu Gly 65 70 75

Gly Pro Ser Pro Pro Thr Asn Phe Leu Asp Gly Ile Val Asp Phe 80 85 90

Phe Arg Gln Tyr Val Met Leu Ile Ala Val Val Gly Ser Leu Ala 95 100 105

Phe Leu Leu Met Phe Ile Val Cys Ala Ala Val Ile Thr Arg Gln 110 115 120

Lys Gln Lys Ala Ser Ala Tyr Tyr Pro Ser Ser Phe Pro Lys Lys 125 130 135

Lys Tyr Val Asp Gln Ser Asp Arg Ala Gly Gly Pro Arg Ala Phe 140 145 150

Ser Glu Val Pro Asp Arg Ala Pro Asp Ser Arg Pro Glu Glu Ala 155 160 165

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Gln Asn Leu Lys Ser Pro Thr Arg Ala Ala Leu Gly Gly Gly Asp
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Gly Ala Arg Met Val Glu Gly Arg Gly Ala Glu Glu Glu Lys
                200
Gly Ser Gln Glu Gly Asp Gln Glu Val Gln Gly His Gly Val Pro
                                                         225
                215
Val Glu Thr Pro Glu Ala Gln Glu Glu Pro Cys Ser Gly Val Leu
                                                        240
                230
Glu Gly Ala Val Val Ala Gly Glu Gly Gln Gly Glu Leu Glu Gly
                                                        255
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Ser Leu Leu Ala Gln Glu Ala Gln Gly Pro Val Gly Pro Pro
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<210> 51

<211> 1734

<212> DNA

<213> Homo sapiens

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gcacagagac gcagagcaag ggcggcaagg aggagaccct ggtgggagga 150
agacactctg gagagagagg gggctgggca gagatgaagt tccaggggcc 200
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- <211> 440
- <212> PRT
- <213> Homo sapiens
- <400> 52
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- Leu Gly Ser Gly Glu Ala Gly Pro Leu Gln Ser Gly Glu Glu Ser 20 25 30
- Thr Gly Thr Asn Ile Gly Glu Ala Leu Gly His Gly Leu Gly Asp 35 40 45
- Ala Leu Ser Glu Gly Val Gly Lys Ala Ile Gly Lys Glu Ala Gly

				50					55					60
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Arg	Glu	Ala	Val	Gly 80	Thr	Gly	Val	Arg	Gln 85	Val	Pro	Gly	Phe	Gl ₃ 90
Ala	Ala	Asp	Ala	Leu 95	Gly	Asn	Arg	Val	Gly 100	Glu	Ala	Ala	His	Ala 105
Leu	Gly	Asn	Thr	Gly 110	His	Glu	Ile	Gly	Arg 115	Gln	Ala	Glu	Asp	Val
Ile	Arg	His	Gly	Ala 125	Asp	Ala	Val	Arg	Gly 130	Ser	Trp	Gln	Gly	Va]
Pro	Gly	His	Ser	Gly 140	Ala	Trp	Glu	Thr	Ser 145	Gly	Gly	His	Gly	Ile 150
Phe	Gly	Ser	Gln	Gly 155	Gly	Leu	Gly	Gly	Gln 160	Gly	Gln	Gly	Asn	Pro 165
Gly	Gly	Leu	Gly	Thr 170	Pro	Trp	Val	His	Gly 175	Tyr	Pro	Gly	Asn	Sei 180
Ala	Gly	Ser	Phe	Gly 185	Met	Asn	Pro	Gln	Gly 190	Ala	Pro	Trp	Gly	Glr 195
Gly	Gly	Asn	Gly	Gly 200	Pro	Pro	Asn	Phe	Gly 205	Thr	Asn	Thr	Gln	Gly 210
Ala	Val	Ala	Gln	Pro 215	Gly	Tyr	Gly	Ser	Val 220	Arg	Ala	Ser	Asn	Gl: 225
Asn	Glu	Gly	Cys	Thr 230	Asn	Pro	Pro	Pro	Ser 235	Gly	Ser	Gly	Gly	Gl ₂ 240
Ser	Ser	Asn	Ser	Gly 245	Gly	Gly	Ser	Gly	Ser 250	Gln	Ser	Gly	Ser	Se: 255
Gly	Ser	Gly	Ser	Asn 260	Gly	Asp	Asn	Asn	Asn 265	Gly	Ser	Ser	Ser	Gly 270
Gly	Ser	Ser	Ser	Gly 275	Ser	Ser	Ser	Gly	Ser 280	Ser	Ser	Gly	Gly	Se:
Ser	Gly	Gly	Ser	Ser 290	Gly	Gly	Ser	Ser	Gly 295	Asn	Ser	Gly	Gly	Se:
Arg	Gly	Asp	Ser	Gly 305	Ser	Glu	Ser	Ser	Trp 310	Gly	Ser	Ser	Thr	Gl ₃
Ser	Ser	Ser	Gly	Asn 320	His	Gly	Gly	Ser	Gly 325	Gly	Gly	Asn	Gly	His 330
Lys	Pro	Gly	Cys	Glu 335	Lys	Pro	Gly	Asn	Glu 340	Ala	Arg	Gly	Ser	G1 34

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Gly Asp Ala Val Gly Gly Val Asn Thr Val Asn Ser Glu Thr Ser
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Pro Gly Met Phe Asn Phe Asp Thr Phe Trp Lys Asn Phe Lys Ser
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Lys Leu Gly Phe Ile Asn Trp Asp Ala Ile Asn Lys Asp Gln Arg
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Ser Ser Arg Ile Pro
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440

<210> 53

<211> 3580

<212> DNA

<213> Homo sapiens

<400> 53

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<213> Homo sapiens

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<211> 299

<213> Homo sapiens

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Pro Val Asn Leu Lys Lys Trp Ser Ile Thr Asp Gly Tyr Val Pro
Ile Leu Gly Asn Lys Thr Leu Pro Ser Arg Cys His Gln Cys Val
Ile Val Ser Ser Ser His Leu Leu Gly Thr Lys Leu Gly Pro
Glu Ile Glu Arg Ala Glu Cys Thr Ile Arg Met Asn Asp Ala Pro
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Thr Thr Gly Tyr Ser Ala Asp Val Gly Asn Lys Thr Thr Tyr Arg
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Val Val Ala His Ser Ser Val Phe Arg Val Leu Arg Arg Pro Gln
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Glu Phe Val Asn Arg Thr Pro Glu Thr Val Phe Ile Phe Trp Gly
Pro Pro Ser Lys Met Gln Lys Pro Gln Gly Ser Leu Val Arg Val
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                                                         165
Ile Gln Arg Ala Gly Leu Val Phe Pro Asn Met Glu Ala Tyr Ala
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Val Ser Pro Gly Arg Met Arg Gln Phe Asp Asp Leu Phe Arg Gly
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Glu Thr Gly Lys Asp Arg Glu Lys Ser His Ser Trp Leu Ser Thr
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Gly Trp Phe Thr Met Val Ile Ala Val Glu Leu Cys Asp His Val
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His Val Tyr Gly Met Val Pro Pro Asn Tyr Cys Ser Gln Arg Pro
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Arg Leu Gln Arg Met Pro Tyr His Tyr Tyr Glu Pro Lys Gly Pro
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Asp Glu Cys Val Thr Tyr Ile Gln Asn Glu His Ser Arg Lys Gly
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Asn His His Arg Phe Ile Thr Glu Lys Arg Val Phe Ser Ser Trp
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Ala	Asp	Asn	Gly	Val 305	Gly	Gln	Pro	Gly	Ala 310	Ala	Val	Ile	Leu	Tyr 315
Asn	Val	Gln	Val	Phe 320	Glu	Pro	Pro	Glu	Val 325	Thr	Met	Glu	Leu	Ser 330
Gln	Leu	Val	Ile	Pro 335	Trp	Gly	Gln	Ser	Ala 340	Lys	Leu	Thr	Cys	Glu 345
Val	Arg	Gly	Asn	Pro 350	Pro	Pro	Ser	Val	Leu 355	Trp	Leu	Arg	Asn	Ala 360
Val	Pro	Leu	Ile	Ser 365	Ser	Gln	Arg	Leu	Arg 370	Leu	Ser	Arg	Arg	Ala 375
Leu	Arg	Val	Leu	Ser 380	Met	Gly	Pro	Glu	Asp 385	Glu	Gly	Val	Tyr	Gln 390
Cys	Met	Ala	Glu	Asn 395	Glu	Val	Gly	Ser	Ala 400	His	Ala	Val	Val	Gln 405
Leu	Arg	Thr	Ser	Arg 410	Pro	Ser	Ile	Thr	Pro 415	Arg	Leu	Trp	Gln	Asp 420
Ala	Glu	Leu	Ala	Thr 425	Gly	Thr	Pro	Pro	Val 430	Ser	Pro	Ser	Lys	Leu 435
Gly	Asn	Pro	Glu	Gln 440	Met	Leu	Arg	Gly	Gln 445	Pro	Ala	Leu	Pro	Arg 450
Pro	Pro	Thr	Ser	Val 455	Gly	Pro	Ala	Ser	Pro 460	Lys	Cys	Pro	Gly	Glu 465
Lys	Gly	Gln	Gly	Ala 470	Pro	Ala	Glu	Ala	Pro 475	Ile	Ile	Leu	Ser	Ser 480
Pro	Arg	Thr	Ser	Lys 485	Thr	Asp	Ser	Tyr	Glu 490	Leu	Val	Trp	Arg	Pro 495
Arg	His	Glu	Gly	Ser 500	Gly	Arg	Ala	Pro	Ile 505	Leu	Tyr	Tyr	Val	Val 510
Lys	His	Arg	Lys	Gln 515	Val	Thr	Asn	Ser	Ser 520	Asp	Asp	Trp	Thr	Ile 525
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Asp	Pro	Gly	Ser	Leu 545	Tyr	Glu	Val	Glu	Met 550	Ala	Ala	Tyr	Asn	Cys 555
Ala	Gly	Glu	Gly	Gln	Thr	Ala	Met	Val	Thr	Phe	Arg	Thr	Gly	Arg

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His	Gly	Arg	Leu	Ser 605	Pro	Pro	Glu	Ala	Pro 610	Asp	Arg	Pro	Thr	Ile 615
Ser	Thr	Ala	Ser	Glu 620	Thr	Ser	Val	Tyr	Val 625	Thr	Trp	Ile	Pro	Arg 630
Gly	Asn	Gly	Gly	Phe 635	Pro	Ile	Gln	Ser	Phe 640	Arg	Val	Glu	Tyr	Lys 645
Lys	Leu	Lys	Lys	Val 650	Gly	Asp	Trp	Ile	Leu 655	Ala	Thr	Ser	Ala	Ile 660
Pro	Pro	Ser	Arg	Leu 665	Ser	Val	Glu	Ile	Thr 670	Gly	Leu	Glu	Lys	Gly 675
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Ser	Glu	Pro	Ser	Ala 695	Pro	Ser	Arg	Pro	Tyr 700	Val	Val	Ser	Gly	Tyr 705
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Phe	Thr	Asp	Ala	Val 725	Asn	Glu	Thr	Thr	Ile 730	Met	Leu	Lys	Trp	Met 735
Tyr	Ile	Pro	Ala	Ser 740	Asn	Asn	Asn	Thr	Pro 745	Ile	His	Gly	Phe	Tyr 750
Ile	Tyr	Tyr	Arg	Pro 755	Thr	Asp	Ser	Asp	Asn 760	Asp	Ser	Asp	Tyr	Lys 765
Lys	Asp	Met	Val	Glu 770	Gly	Asp	Lys	Tyr	Trp 775	His	Ser	Ile	Ser	His 780
Leu	Gln	Pro	Glu	Thr 785	Ser	Tyr	Asp	Ile	Lys 790	Met	Gln	Cys	Phe	Asn 795
Glu	Gly	Gly	Glu	Ser 800	Glu	Phe	Ser	Asn	Val 805	Met	Ile	Суз	Glu	Thr 810
Lys	Ala	Arg	Lys	Ser 815	Ser	Gly	Gln	Pro	Gly 820	Arg	Leu	Pro	Pro	Pro 825
Thr	Leu	Ala	Pro	Pro 830	Gln	Pro	Pro	Leu	Pro 835	Glu	Thr	Ile	Glu	Arg 840
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<213> Artificial

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<211> 487

<212> PRT

<213> Homo sapiens

<220>

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Leu Asn Val Pro	Asp Asp Ile 305	Leu Gln Leu 310	Leu Lys Asn	Gly Gly 315							
Ile Val Met Val	Thr Leu Ser 320	Met Gly Val 325	Leu Gln Cys	Asn Leu 330							
Leu Ala Asn Val	Ser Thr Val	Ala Asp His 340	Phe Asp His	Ile Arg 345							
Ala Val Ile Gly	Ser Glu Phe 350	Ile Gly Ile 355	Gly Gly Asn	Tyr Asp 360							
Gly Thr Gly Arg	Phe Pro Gln 365	Gly Leu Glu 370	Asp Val Ser	Thr Tyr 375							
Pro Val Leu Ile	Glu Glu Leu 380	Leu Ser Arg 385	Xaa Trp Ser	Glu Glu 390							
Glu Leu Gln Gly	Val Leu Arg 395	Gly Asn Leu 400	Leu Arg Val	Phe Arg 405							
Gln Val Glu Lys	Val Arg Glu 410	Glu Ser Arg 415	Ala Gln Ser	Pro Val 420							
Glu Ala Glu Phe	Pro Tyr Gly 425	Gln Leu Ser 430	Thr Ser Cys	His Ser 435							
His Leu Val Pro	Gln Asn Gly 440	His Gln Ala 445	Thr His Leu	Glu Val 450							
Thr Lys Gln Pro	Thr Asn Arg 455	Val Pro Trp 460	Arg Ser Ser	Asn Ala 465							
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<223> Synthetic construct.
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<213> Homo sapiens
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 ggcccagcaa gcctgataag catgaagctc ttatctttgg tggctgtggt 150
 cgggtgtttg ctggtgccc cagctgaagc caacaagagt tctgaagata 200
 tccggtgcaa atgcatctgt ccaccttata gaaacatcag tgggcacatt 250
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<210> 68

<211> 183

<212> PRT

<213> Homo sapiens

<400> 68

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Cys Ile Cys Pro Pro Tyr Arg Asn Ile Ser Gly His Ile Tyr Asn
40
45

Gln Asn Val Ser Gln Lys Asp Cys Asn Cys Leu His Val Val Glu 50 55 60

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Cys Glu Cys Arg Tyr Glu Glu Arg Ser Thr Thr Thr Ile Lys Val
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                                     8.5
                                                          90
Ile Ile Val Ile Tyr Leu Ser Val Val Gly Ala Leu Leu Tyr
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Met Ala Phe Leu Met Leu Val Asp Pro Leu Ile Arg Lys Pro Asp
                                    115
Ala Tyr Thr Glu Gln Leu His Asn Glu Glu Glu Asn Glu Asp Ala
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                                                        135
Arg Ser Met Ala Ala Ala Ala Ser Leu Gly Gly Pro Arg Ala
Asn Thr Val Leu Glu Arg Val Glu Gly Ala Gln Gln Arg Trp Lys
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Met Leu Ser

<210> 69 <211> 3170 <212> DNA

<213> Homo sapiens

<400> 69

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- <210> 70
- <211> 259
- <212> PRT
- <213> Homo sapiens
- <400> 70
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- Leu Leu Ala Ala Val Leu Met Val Glu Ser Ser Gln Ile Gly Ser
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- Ser Arg Ala Lys Leu Asn Ser Ile Lys Ser Ser Leu Gly Gly Glu
 35 40 45

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Thr Pro Gly Gln Ala Ala Asn Arg Ser Ala Gly Met Tyr Gln Gly
Leu Ala Phe Gly Gly Ser Lys Lys Gly Lys Asn Leu Gly Gln Ala
Tyr Pro Cys Ser Ser Asp Lys Glu Cys Glu Val Gly Arg Tyr Cys
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His Ser Pro His Gln Gly Ser Ser Ala Cys Met Val Cys Arg Arg
Lys Lys Lys Arg Cys His Arg Asp Gly Met Cys Cys Pro Ser Thr
Arg Cys Asn Asn Gly Ile Cys Ile Pro Val Thr Glu Ser Ile Leu
Thr Pro His Ile Pro Ala Leu Asp Gly Thr Arg His Arg Asp Arg
Asn His Gly His Tyr Ser Asn His Asp Leu Gly Trp Gln Asn Leu
Gly Arg Pro His Thr Lys Met Ser His Ile Lys Gly His Glu Gly
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                                                         180
Asp Pro Cys Leu Arg Ser Ser Asp Cys Ile Glu Gly Phe Cys Cys
Ala Arg His Phe Trp Thr Lys Ile Cys Lys Pro Val Leu His Gln
                200
                                                         210
Gly Glu Val Cys Thr Lys Gln Arg Lys Lys Gly Ser His Gly Leu
                215
Glu Ile Phe Gln Arg Cys Asp Cys Ala Lys Gly Leu Ser Cys Lys
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Val Trp Lys Asp Ala Thr Tyr Ser Ser Lys Ala Arg Leu His Val
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Cys Gln Lys Ile

<210> 71

<211> 1809

<212> DNA

<213> Homo sapiens

<400> 71

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<210> 72

<211> 363

<212> PRT

<213> Homo sapiens

<400> 72

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Phe Gly Glu Leu Ala Pro Pro Lys Met Ala Asn Ile Thr Ser Ser 35 40 45

Gln Ile Leu Asp Gln Leu Lys Ala Pro Ser Leu Gly Gln Phe Thr 50 55 60

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65 70 75

Thr Thr Ser Trp Asp Leu Lys Pro Pro Thr Ser Gln Ser Ser Val 80 85 90

Leu Ser His Leu Asp Phe Lys Ser Gln Pro Glu Pro Ser Pro Val 95 100 105

Leu Ser Gln Leu Ser Gln Arg Gln Gln His Gln Ser Gln Ala Val 110 115 120

Thr Val Pro Pro Gly Leu Glu Ser Phe Pro Ser Gln Ala Lys 125 130 135

Leu Arg Glu Ser Thr Pro Gly Asp Ser Pro Ser Thr Val Asn Lys
140 145 150

Leu Leu Gln Leu Pro Ser Thr Thr Ile Glu Asn Ile Ser Val Ser 155 160 165

Val His Gln Pro Gln Pro Lys His Ile Lys Leu Ala Lys Arg Arg 170 175 180

Ile Pro Pro Ala Ser Lys Ile Pro Ala Ser Ala Val Glu Met Pro
185 190 195

Gly Ser Ala Asp Val Thr Gly Leu Asn Val Gln Phe Gly Ala Leu 200 205 210

Glu Phe Gly Ser Glu Pro Ser Leu Ser Glu Phe Gly Ser Ala Pro 215 220 225

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 Val Gln Asn Ser Thr Tyr Thr Thr Ser Val Ile Thr Ser Cys Ser
 Leu Thr Ser Ser Ser Leu Asn Ser Ala Ser Pro Val Ala Met Ser
 Ser Ser Tyr Asp Gln Ser Ser Val His Asn Arg Ile Pro Tyr Gln
 Ser Pro Val Ser Ser Ser Glu Ser Ala Pro Gly Thr Ile Met Asn
                                      310
 Gly His Gly Gly Gly Arg Ser Gln Gln Thr Leu Asp Ser Lys Tyr
                  320
                                      325
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 Lys Arg Ile Ala His Val Met Trp Lys Thr Pro Val Gly Gln Trp
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<223> Synthetic construct.
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<210> 75
<211> 50
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<211> 341

<212> PRT

<213> Homo sapiens

<400> 77

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Ala Gly Leu Tyr Thr Cys Asn Leu His His His Tyr Cys His Leu 35 40 45

Tyr Glu Ser Leu Ala Val Arg Leu Glu Val Thr Asp Gly Pro Pro 50 55 60

Ala Thr Pro Ala Tyr Trp Asp Gly Glu Lys Glu Val Leu Ala Val 65 70 75

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 Val Trp Thr Asp Arg His Val Glu Glu Ala Gln Gln Val Val His
 Trp Asp Arg Gln Pro Pro Gly Val Pro His Asp Arg Ala Asp Arg
 Leu Leu Asp Leu Tyr Ala Ser Gly Glu Arg Arg Ala Tyr Gly Pro
 Leu Phe Leu Arg Asp Arg Val Ala Val Gly Ala Asp Ala Phe Glu
 Arg Gly Asp Phe Ser Leu Arg Ile Glu Pro Leu Glu Val Ala Asp
Glu Gly Thr Tyr Ser Cys His Leu His His His Tyr Cys Gly Leu
His Glu Arg Arg Val Phe His Leu Thr Val Ala Glu Pro His Ala
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Glu Pro Pro Pro Arg Gly Ser Pro Gly Asn Gly Ser Ser His Ser
                                     205
Gly Ala Pro Gly Pro Asp Pro Thr Leu Ala Arg Gly His Asn Val
Ile Asn Val Ile Val Pro Glu Ser Arg Ala His Phe Phe Gln Gln
                230
Leu Gly Tyr Val Leu Ala Thr Leu Leu Leu Phe Ile Leu Leu
Val Thr Val Leu Leu Ala Ala Arg Arg Arg Gly Gly Tyr Glu
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Tyr Ser Asp Gln Lys Ser Gly Lys Ser Lys Gly Lys Asp Val Asn
Leu Ala Glu Phe Ala Val Ala Ala Gly Asp Gln Met Leu Tyr Arg
                290
                                                        300
Ser Glu Asp Ile Gln Leu Asp Tyr Lys Asn Asn Ile Leu Lys Glu
Arg Ala Glu Leu Ala His Ser Pro Leu Pro Ala Lys Tyr Ile Asp
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<212> DNA

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<213> Homo sapiens

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35 40 45

Pro Glu Asp Arg Phe Cys Gly Thr Tyr Ile Ile Phe Phe Ser Leu
50 55 60

Gly Ile Gly Ser Leu Leu Pro Trp Asn Phe Phe Ile Thr Ala Lys
65 70 75

Glu Tyr Trp Met Phe Lys Leu Arg Asn Ser Ser Ser Pro Ala Thr 80 85 90

Gly Glu Asp Pro Glu Gly Ser Asp Ile Leu Asn Tyr Phe Glu Ser 95 100 105

Tyr	: Le	ı Ala	a Val	L Ala	Ser	Thi	val	l Pro	Se:		Leu	Cys	s Leu	Val 120
Ala	Ası	n Phe	e Leu	125	Val	Asn	Arg	y Val	Ala 130		. His	Ile	e Arg	Val 135
Leu	Ala	a Ser	Leu	Thr 140	Val	Ile	e Leu	ı Ala	11e		Met	. Val	. Ile	Thr 150
Ala	Leu	ı Val	. Lys	Val 155	Asp	Thr	Ser	Ser	Trp 160		Arg	Gly	Phe	Phe 165
Ala	Val	. Thr	: Ile	val 170	Суз	Met	Val	Ile	Leu 175		Gly	Ala	Ser	Thr 180
Val	Phe	e Ser	Ser	Ser 185	Ile	Tyr	Gly	Met	Thr 190		Ser	Phe	Pro	Met 195
Arg	Asn	Ser	Gln	Ala 200	Leu	Ile	Ser	Gly	Gly 205		Met	Gly	Gly	Thr 210
Val	Ser	Ala	Val	Ala 215	Ser	Leu	Val	Asp	Leu 220		Ala	Ser	Ser	Asp 225
Val	Arg	Asn	Ser	Ala 230	Leu	Ala	Phe	Phe	Leu 235	Thr	Ala	Thr	Ile	Phe 240
Leu	Val	Leu	Cys	Met 245	Gly	Leu	Tyr	Leu	Leu 250	Leu	Ser	Arg	Leu	Glu 255
				Tyr 260					265					270
				Glu 275					280					285
				Phe 290					295					300
				Thr 305					310					315
				Ser 320					325					330
				Lys 335					340					345
				Thr 350					355					360
Cys	Gly	Arg	Gln	Leu 365	Thr	Ala	Trp	Ile	Gln 370	Val	Pro	Gly	Pro	Asn 375
Ser	Lys	Ala	Leu	Pro 380	Gly	Phe	Val	Leu	Leu 385	Arg	Thr	Cys		Ile 390
Pro	Leu	Phe	Val	Leu	Суз	Asn	Tyr	Gln	Pro	Arg	Val	His	Leu	Lys

395 400 405 Thr Val Val Phe Gln Ser Asp Val Tyr Pro Ala Leu Leu Ser Ser 410 Leu Leu Gly Leu Ser Asn Gly Tyr Leu Ser Thr Leu Ala Leu Leu Tyr Gly Pro Lys Ile Val Pro Arg Glu Leu Ala Glu Ala Thr Gly 445 Val Val Met Ser Phe Tyr Val Cys Leu Gly Leu Thr Leu Gly Ser 460 Ala Cys Ser Thr Leu Leu Val His Leu Ile 470 475 <210> 80 <211> 22 <212> DNA <213> Artificial <220> <221> Artificial sequence <222> 1-22 <223> Synthetic construct. <400> 80 ttttgcggtc accattgtct gc 22 <210> 81 <211> 23 <212> DNA <213> Homo sapiens <220> <221> Artificial sequence <222> 1-23 <223> Synthetic construct. <400> 81 cgtaggtgac acagaagccc agg 23 <210> 82 <211> 49 <212> DNA <213> Artificial <220> <221> Artificial sequence <222> 1-49 <223> Synthetic construct. tacggcatga ccggctcctt tcctatgagg aactcccagg cactgatat 49 <210> 83 <211> 1844

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<213> Homo sapiens

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Asp Pro Phe Glu Lys Cys Met Gln Asp Pro Asp Tyr Glu Gln Leu 35 40 45

Leu Lys Val Val Thr Trp Gly Leu Asn Arg Thr Leu Lys Pro Gln
50 55 60

Arg Val Ile Val Val Gly Ala Gly Val Ala Gly Leu Val Ala Ala 65 70 75

Lys Val Leu Ser Asp Ala Gly His Lys Val Thr Ile Leu Glu Ala 80 85 90

Asp Asn Arg Ile Gly Gly Arg Ile Phe Thr Tyr Arg Asp Gln Asn 95 100 105

Thr Gly Trp Ile Gly Glu Leu Gly Ala Met Arg Met Pro Ser Ser 110 115 120

His Arg Ile Leu His Lys Leu Cys Gln Gly Leu Gly Leu Asn Leu 125 130 135

Thr Lys Phe Thr Gln Tyr Asp Lys Asn Thr Trp Thr Glu Val His
140 145 150

Glu Val Lys Leu Arg Asn Tyr Val Val Glu Lys Val Pro Glu Lys 155 160 165

Leu Gly Tyr Ala Leu Arg Pro Gln Glu Lys Gly His Ser Pro Glu Asp Ile Tyr Gln Met Ala Leu Asn Gln Ala Leu Lys Asp Leu Lys Ala Leu Gly Cys Arg Lys Ala Met Lys Lys Phe Glu Arg His Thr Leu Leu Glu Tyr Leu Leu Gly Glu Gly Asn Leu Ser Arg Pro Ala Val Gln Leu Gly Asp Val Met Ser Glu Asp Gly Phe Phe Tyr Leu Ser Phe Ala Glu Ala Leu Arg Ala His Ser Cys Leu Ser Asp Arg Leu Gln Tyr Ser Arg Ile Val Gly Gly Trp Asp Leu Leu Pro Arg Ala Leu Leu Ser Ser Leu Ser Gly Leu Val Leu Leu Asn Ala Pro Val Val Ala Met Thr Gln Gly Pro His Asp Val His Val Gln 290 Ile Glu Thr Ser Pro Pro Ala Arg Asn Leu Lys Val Leu Lys Ala Asp Val Val Leu Leu Thr Ala Ser Gly Pro Ala Val Lys Arg Ile 320 Thr Phe Ser Pro Pro Leu Pro Arg His Met Gln Glu Ala Leu Arg 335 Arg Leu His Tyr Val Pro Ala Thr Lys Val Phe Leu Ser Phe Arg 350 Arg Pro Phe Trp Arg Glu Glu His Ile Glu Gly Gly His Ser Asn Thr Asp Arg Pro Ser Arg Met Ile Phe Tyr Pro Pro Pro Arg Glu 380 Gly Ala Leu Leu Ala Ser Tyr Thr Trp Ser Asp Ala Ala Ala 395 Ala Phe Ala Gly Leu Ser Arg Glu Glu Ala Leu Arg Leu Ala Leu 410 Asp Asp Val Ala Ala Leu His Gly Pro Val Val Arg Gln Leu Trp Asp Gly Thr Gly Val Val Lys Arg Trp Ala Glu Asp Gln His Ser 440 450 Gln Gly Gly Phe Val Val Gln Pro Pro Ala Leu Trp Gln Thr Glu

				455					460					465
Lys	Asp	Asp	Trp	Thr 470	Val	Pro	Tyr	Gly	Arg 475	Ile	Tyr	Phe	Ala	Gly 480
Glu	His	Thr	Ala	Tyr 485	Pro	His	Gly	Trp	Val 490	Glu	Thr	Ala	Val	Lys 495
Ser	Ala	Leu	Arg	Ala 500	Ala	Ile	Lys	Ile	Asn 505	Ser	Arg	Lys	Gly	Pro 510
Ala	Ser	Asp	Thr	Ala 515	Ser	Pro	Glu	Gly	His 520	Ala	Ser	Asp	Met	Glu 525
Gly	Gln	Gly	His	Val 530	His	Gly	Val	Ala	Ser 535	Ser	Pro	Ser	His	Asp 540
Leu	Ala	Lys	Glu	Glu 545	Gly	Ser	His	Pro	Pro 550	Val	Gln	Gly	Gln	Leu 555
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<213> Homo sapiens

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- <212> PRT
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- Gly Lys Lys Asp Arg Asp Ser Cys Gly Arg Lys Asn Ser Glu Pro $20 \\ 25 \\ 30$

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Phe	Asn	Phe	Leu	Phe 65	Ser	Pro	Leu	Pro	Thr 70		Ala	Leu	Ile	Cys
Ile	Leu	Thr	Phe	Gly 80	Ala	Ala	Ile	Phe	Leu 85		Leu	Ile	Thr	Arg 90
Pro	Gln	Pro	Val	Leu 95	Pro	Leu	Leu	Asp	Leu 100	Asn	Asn	Gln	Ser	Val
Gly	Ile	Glu	Gly	Gly 110	Ala	Arg	Lys	Gly	Val 115	Ser	Gln	Lys	Asn	Asr 120
Asp	Leu	Thr	Ser	Cys 125	Cys	Phe	Ser	Asp	Ala 130	Lys	Thr	Met	Tyr	Glu 135
Val	Phe	Gln	Arg	Gly 140	Leu	Ala	Val	Ser	Asp 145	Asn	Gly	Pro	Суз	Leu 150
Gly	Tyr	Arg	Lys	Pro 155	Asn	Gln	Pro	Tyr	Arg 160	Trp	Leu	Ser	Tyr	Lys 165
Gln	Val	Ser	Asp	Arg 170	Ala	Glu	Tyr	Leu	Gly 175	Ser	Cys	Leu	Leu	His 180
Lys	Gly	Tyr	Lys	Ser 185	Ser	Pro	Asp	Gln	Phe 190	Val	Gly	Ile	Phe	Ala 195
Gln	Asn	Arg	Pro	Glu 200	Trp	Ile	Ile	Ser	Glu 205	Leu	Ala	Cys	Tyr	Thr 210
Tyr	Ser	Met	Val	Ala 215	Val	Pro	Leu	Tyr	Asp 220	Thr	Leu	Gly	Pro	Glu 225
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Cys	Asp	Thr	Pro	Gln 245	Lys	Ala	Leu	Val	Leu 250	Ile	Gly	Asn	Val	Glu 255
Lys	Gly	Phe	Thr	Pro 260	Ser	Leu	Lys	Val	Ile 265	Ile	Leu	Met	Asp	Pro 270
Phe	Asp	Asp	Asp	Leu 275	Lys	Gln	Arg	Gly	Glu 280	Lys	Ser	Gly	Ile	Glu 285
Ile	Leu	Ser	Leu	Tyr 290	Asp	Ala	Glu	Asn	Leu 295	Gly	Lys	Glu	His	Phe 300
Arg	Lys	Pro	Val	Pro 305	Pro	Ser	Pro	Glu	Asp 310	Leu	Ser	Val	Ile	Cys 315
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Leu	Leu	Ala	Asp	Asp 395	Met	Lys	Thr	Leu	Lys 400	Pro	Thr	Leu	Phe	Pro 405
Ala	Val	Pro	Arg	Leu 410	Leu	Asn	Arg	Ile	Tyr 415	Asp	Lys	Val	Gln	Asn 420
Glu	Ala	Lys	Thr	Pro 425	Leu	Lys	Lys	Phe	Leu 430	Leu	Lys	Leu	Ala	Val 435
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Ser Phe Glu Glu Leu Cys Gln Asn Gln Val Val Arg Glu Ala Ile
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Phe Glu Gln Val Lys Ala Ile Phe Leu His Pro Glu Pro Phe Ser
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                                     700
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Ile Glu Asn Gly Leu Leu Thr Pro Thr Leu Lys Ala Lys Arg Gly
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- Phe Leu Leu Val Thr Val Ile Val Asn Ile Lys Leu Ile Leu Asp 50 55 60
- Thr Arg Arg Ala Ile Ser Glu Ala Asn Glu Asp Pro Glu Pro Glu 65 70 75
- Gln Asp Tyr Asp Glu Ala Leu Gly Arg Leu Glu Pro Pro Arg Arg 80 85 90
- Arg Gly Ser Gly Pro Arg Arg Val Leu Asp Val Glu Val Tyr Ser
- Ser Arg Ser Lys Val Tyr Val Ala Val Asp Gly Thr Thr Val Leu 110 115 120
- Glu Asp Glu Ala Arg Glu Gln Gly Arg Gly Ile His Val Ile Val 125 130 135

Leu Asn Gln Ala Thr Gly His Val Met Ala Lys Arg Val Phe Asp Thr Tyr Ser Pro His Glu Asp Glu Ala Met Val Leu Phe Leu Asn Met Val Ala Pro Gly Arg Val Leu Ile Cys Thr Val Lys Asp Glu Gly Ser Phe His Leu Lys Asp Thr Ala Lys Ala Leu Leu Arg Ser Leu Gly Ser Gln Ala Gly Pro Ala Leu Gly Trp Arg Asp Thr Trp Ala Phe Val Gly Arg Lys Gly Gly Pro Val Phe Gly Glu Lys His Ser Lys Ser Pro Ala Leu Ser Ser Trp Gly Asp Pro Val Leu Leu Lys Thr Asp Val Pro Leu Ser Ser Ala Glu Glu Ala Glu Cys His Trp Ala Asp Thr Glu Leu Asn Arg Arg Arg Arg Phe Cys Ser Lys Val Glu Gly Tyr Gly Ser Val Cys Ser Cys Lys Asp Pro Thr 280 Pro Ile Glu Phe Ser Pro Asp Pro Leu Pro Asp Asn Lys Val Leu 295 Asn Val Pro Val Ala Val Ile Ala Gly Asn Arg Pro Asn Tyr Leu 310 Tyr Arg Met Leu Arg Ser Leu Leu Ser Ala Gln Gly Val Ser Pro 320 325 Gln Met Ile Thr Val Phe Ile Asp Gly Tyr Tyr Glu Glu Pro Met 335 Asp Val Val Ala Leu Phe Gly Leu Arg Gly Ile Gln His Thr Pro 350 Ile Ser Ile Lys Asn Ala Arg Val Ser Gln His Tyr Lys Ala Ser 365 Leu Thr Ala Thr Phe Asn Leu Phe Pro Glu Ala Lys Phe Ala Val 380 Val Leu Glu Glu Asp Leu Asp Ile Ala Val Asp Phe Phe Ser Phe 400 Leu Ser Gln Ser Ile His Leu Leu Glu Glu Asp Asp Ser Leu Tyr 410 420 Cys Ile Ser Ala Trp Asn Asp Gln Gly Tyr Glu His Thr Ala Glu

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Trp	Pro	Thr	Pro	Glu 470	Lys	Leu	Trp	Asp	Trp 475	Asp	Met	Trp	Met	Arg 480
Met	Pro	Glu	Gln	Arg 485	Arg	Gly	Arg	Glu	Cys 490	Ile	Ile	Pro	Asp	Val 495
Ser	Arg	Ser	Tyr	His 500	Phe	Gly	Ile	Val	Gly 505	Leu	Asn	Met	Asn	Gly 510
Tyr	Phe	His	Glu	Ala 515	Tyr	Phe	Lys	Lys	His 520	Lys	Phe	Asn	Thr	Val 525
Pro	Gly	Val	Gln	Leu 530	Arg	Asn	Val	Asp	Ser 535	Leu	Lys	Lys	Glu	Ala 540
Tyr	Glu	Val	Glu	Val 545	His	Arg	Leu	Leu	Ser 550	Glu	Ala	Glu	Val	Leu 555
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Glu	Gly	His	Thr	Tyr 575	Val	Ala	Phe	Ile	Arg 580	Met	Glu	Lys	Asp	Asp 585
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- Leu Cys Gly Thr Ala Leu Ala Val Ile Val Pro Glu Gly Val His
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- Ala Leu Tyr Glu Asp Ile Leu Glu Gly Lys His His Gln Ala Ser
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- Glu Thr His Asn Val Ile Ala Ser Asp Lys Ala Ala Glu Lys Ser 80 85 90
- Val Val His Glu His Ser His Asp His Thr Gln Leu His
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- Ala Tyr Ile Gly Val Ser Leu Val Leu Gly Phe Val Phe Met Leu 110 115 120
- Leu Val Asp Gln Ile Gly Asn Ser His Val His Ser Thr Asp Asp 125 130 135
- Pro Glu Ala Ala Arg Ser Ser Asn Ser Lys Ile Thr Thr Leu 140 145 150
- Gly Leu Val Val His Ala Ala Ala Asp Gly Val Ala Leu Gly Ala 155 160 165
- Ala Ala Ser Thr Ser Gln Thr Ser Val Gln Leu Ile Val Phe Val 170 175 180
- Ala Ile Met Leu His Lys Ala Pro Ala Ala Phe Gly Leu Val Ser 185 190 195
- Phe Leu Met His Ala Gly Leu Glu Arg Asn Arg Ile Arg Lys His 200 205 210
- Leu Leu Val Phe Ala Leu Ala Ala Pro Val Met Ser Met Val Thr 215 220 225
- Tyr Leu Gly Leu Ser Lys Ser Ser Lys Glu Ala Leu Ser Glu Val

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Gly Ala Val Glu Leu Lys Lys Asn Glu Phe Gln Gly Glu Leu Glu
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Gln Leu Glu Ser Val Asn Lys Leu Tyr Gln Asp Glu Lys Ala Val 95 100 105

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Gln Asp Val Leu Gln Phe Gln Lys Asn Gln Thr Asn Leu Glu Arg 140 145 150

Lys Phe Ser Tyr Asp Leu Ser Gln Cys Ile Asn Gln Met Lys Glu 155 160 165

Val Lys Glu Gln Cys Glu Glu Arg Ile Glu Glu Val Thr Lys Lys 170 175 180

Gly Asn Glu Ala Val Ala Ser Arg Asp Leu Ser Glu Asn Asn Asp 185 190 195

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Gln Ala Ala Gly Leu Pro His Thr Glu Val Pro Gln Gly Lys Gly 215 220 225

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Gly Pro Gly Ser Leu Pro Trp Gly Ser Gln Gly Lys Pro Gly Ala 50 55 60

Cys Trp Met Ala Ser Arg Phe Ser Arg Val Val Leu Val Leu Ile 65 70 75

Asp Ala Leu Arg Phe Asp Phe Ala Gln Pro Gln His Ser His Val 80 85 90

Pro Arg Glu Pro Pro Val Ser Leu Pro Phe Leu Gly Lys Leu Ser 95 100 105

Ser Leu Gln Arg Ile Leu Glu Ile Gln Pro His His Ala Arg Leu 110 115 120

Tyr Arg Ser Gln Val Asp Pro Pro Thr Thr Thr Met Gln Arg Leu 125 130 135

Lys Ala Leu Thr Thr Gly Ser Leu Pro Thr Phe Ile Asp Ala Gly
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Ser Asn Phe Ala Ser His Ala Ile Val Glu Asp Asn Leu Ile Lys 155 160 165

Gln Leu Thr Ser Ala Gly Arg Arg Val Val Phe Met Gly Asp Asp 170 175 180

Thr Trp Lys Asp Leu Phe Pro Gly Ala Phe Ser Lys Ala Phe Phe 185 190 195

Phe Pro Ser Phe Asn Val Arg Asp Leu Asp Thr Val Asp Asn Gly

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Asp	Gln	Val	Ile	Gln 260	Gly	Leu	Val	Glu	Arg 265	Leu	Glu	Asn	Asp	Thr 270
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His	Gly	Gly	Asp	Ser 290	Glu	Leu	Glu	Val	Ser 295	Ala	Ala	Leu	Phe	Leu 300
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Lys	Glu	Leu	His	Gln 395	Leu	Gln	Asn	Leu	Phe 400	Ser	Lys	Ala	Ser	Ala 405
Asp	Tyr	Gln	Trp	Leu 410		Gln	Ser		Lys 415		Ala	Glu		Thr 420
Leu	Pro	Thr	Val	Ile 425	Ala	Glu	Leu	Gln	Gln 430	Phe	Leu	Arg	Gly	Ala 435
Arg	Ala	Met	Cys	Ile 440	Glu	Ser	Trp	Ala	Arg 445	Phe	Ser	Leu	Val	Arg 450
Met	Ala	Gly	Gly	Thr 455	Ala	Leu	Leu	Ala	Ala 460	Ser	Cys	Phe	Ile	Cys 465
Leu	Leu	Ala	Ser	Gln 470	Trp	Ala	Ile	Ser	Pro 475	Gly	Phe	Pro	Phe	Cys 480
Pro	Leu	Leu	Leu	Thr 485	Pro	Val	Ala	Trp	Gly 490	Leu	Val	Gly	Ala	Ile 495

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Thr	Val	Pro	Trp	Gln 890	Ala	Val	Ser	Ala	Trp 895	Ala	Leu	Met	Ala	Thr 900
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Pro	Gly	Asn	Glu	Ala 980	Asp	Ala	Arg	Val	Arg 985	Pro	Glu	Glu	Glu	Glu 990
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- Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr
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- Ala Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser 50 55 60
- Met Gln Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu 65 70 75
- Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn His 80 85 90
- Thr Leu Val Leu Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val 95 100 100
- His Val Glu Ser Phe Val Pro Gly Pro Pro Arg Arg Ala Gln Pro 110 115 120
- Ser Glu Lys Gln Cys Ala Arg Thr Leu Lys Asp Gln Ser Ser Glu 125 130 135
- Phe Lys Ala Lys Ile Ile Phe Trp Tyr Val Leu Pro Ile Ser Ile 140 145 150
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Pro Tyr Met Ala Ser Val Arg Phe Gly Gly Gln His His Cys Gly 50 55 60

Gly Phe Leu Leu Arg Ala Arg Trp Val Val Ser Ala Ala His Cys
65 70 75

Phe Ser His Arg Asp Leu Arg Thr Gly Leu Val Val Leu Gly Ala 80 85 90

His Val Leu Ser Thr Ala Glu Pro Thr Gln Gln Val Phe Gly Ile 95 100 105

Asp Ala Leu Thr Thr His Pro Asp Tyr His Pro Met Thr His Ala 110 115 120

Asn Asp Ile Cys Leu Leu Arg Leu Asn Gly Ser Ala Val Leu Gly
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Pro Ala Val Gly Leu Leu Arg Leu Pro Gly Arg Arg Ala Arg Pro 140 145 150

Pro Thr Ala Gly Thr Arg Cys Arg Val Ala Gly Trp Gly Phe Val 155 160 165

Ser Asp Phe Glu Glu Leu Pro Pro Gly Leu Met Glu Ala Lys Val 170 175 180

Arg Val Leu Asp Pro Asp Val Cys Asn Ser Ser Trp Lys Gly His
185 190 195

Leu Thr Leu Thr Met Leu Cys Thr Arg Ser Gly Asp Ser His Arg 200 205 210

Arg Gly Phe Cys Ser Ala Asp Ser Gly Gly Pro Leu Val Cys Arg 215 220 225

Asn Arg Ala His Gly Leu Val Ser Phe Ser Gly Leu Trp Cys Gly 230 235 240

Asp Pro Lys Thr Pro Asp Val Tyr Thr Gln Val Ser Ala Phe Val 245 250 255

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ggtcatcgtg acgggcgcca acacaggcat cgggaagcag accgccttgg 250 aactggccag gagaggaggc aacatcatcc tggcctgccg agacatggag 300 aagtgtgagg cggcagcaaa ggacatccgc ggggagaccc tcaatcacca 350 tgtcaacgcc cggcacctgg acttggcttc cctcaagtct atccgagagt 400 ttgcagcaaa gatcattgaa gaggaggagc gagtggacat tctaatcaac 450 aacgcgggtg tgatgcggtg cccccactgg accaccgagg acggcttcga 500 gatgcagttt ggcgttaacc acctgggtca ctttctcttg acaaacttgc 550 tgctggacaa gctgaaagcc tcagcccctt cgcggatcat caacctctcg 600 tccctggccc atgttgctgg gcacatagac tttgacgact tgaactggca 650 gacgaggaag tataacacca aagccgccta ctgccagagc aagctcgcca 700 tcgtcctctt caccaaggag ctgagccggc ggctgcaagg ctctggtgtg 750 actgtcaacg ccctgcaccc cggcgtggcc aggacagagc tgggcagaca 800 cacgggcatc catggctcca ccttctccag caccacactc gggcccatct 850 tetggetget ggtcaagage eeegagetgg eegeecagee eageacatae 900 ctggccgtgg cggaggaact ggcggatgtt tccggaaagt acttcgatgg 950 actcaaacag aaggccccgg cccccgaggc tgaggatgag gaggtggccc 1000 ggaggetttg ggetgaaagt geeegeetgg tgggettaga ggeteeetet 1050 gtgagggagc agcccctccc cagataacct ctggagcaga tttgaaagcc 1100 aggatggcgc ctccagaccg aggacagctg tccgccatgc ccgcagcttc 1150 ctggcactac ctgagccggg agacccagga ctggcggccg ccatgcccgc 1200 agtaggttct agggggcggt gctggccgca gtggactggc ctgcaggtga 1250 gcactgcccc gggctctggc tggttccgtc tgctctgctg ccagcagggg 1300 agaggggcca tctgatgctt cccctgggaa tctaaactgg gaatggccga 1350 ggaggaaggg gctctgtgca cttgcaggcc acgtcaggag agccagcggt 1400 gcctgtcggg gagggttcca aggtgctccg tgaagagcat gggcaagttg 1450 tctgacactt ggtggattct tgggtccctg tgggaccttg tgcatgcatg 1500 gtcctctctg agccttggtt tcttcagcag tgagatgctc agaataactg 1550 ctgtctccca tgatggtgtg gtacagcgag ctgttgtctg gctatggcat 1600 ggctgtgccg ggggtgtttg ctgagggctt cctgtgccag agcccagcca 1650

gagagcaggt gcaggtgtca tcccgagttc aggctctgca cggcatggag 1700 tgggaacccc accagctgct gctacaggac ctgggattgc ctgggactcc 1750 caccttccta tcaattctca tggtagtcca aactgcagac tctcaaactt 1800 gctcattt 1808

<210> 116

<211> 331

<212> PRT

<213> Homo sapiens

<400> 116

Met Ser Arg Tyr Leu Leu Pro Leu Ser Ala Leu Gly Thr Val Ala 1 5 10 15

Gly Ala Ala Val Leu Leu Lys Asp Tyr Val Thr Gly Gly Ala Cys
20 25 30

Pro Ser Lys Ala Thr Ile Pro Gly Lys Thr Val Ile Val Thr Gly 35 40 45

Ala Asn Thr Gly Ile Gly Lys Gln Thr Ala Leu Glu Leu Ala Arg
50 55 60

Arg Gly Gly Asn Ile Ile Leu Ala Cys Arg Asp Met Glu Lys Cys
65 70 75

Glu Ala Ala Lys Asp Ile Arg Gly Glu Thr Leu Asn His His 80 85 90

Val Asn Ala Arg His Leu Asp Leu Ala Ser Leu Lys Ser Ile Arg 95 100 105

Glu Phe Ala Ala Lys Ile Ile Glu Glu Glu Glu Arg Val Asp Ile 110 115 120

Leu Ile Asn Asn Ala Gly Val Met Arg Cys Pro His Trp Thr Thr 125 130 135

Glu Asp Gly Phe Glu Met Gln Phe Gly Val Asn His Leu Gly His 140 145 150

Phe Leu Leu Thr Asn Leu Leu Leu Asp Lys Leu Lys Ala Ser Ala 155 160 165

Pro Ser Arg Ile Ile Asn Leu Ser Ser Leu Ala His Val Ala Gly
170 175 180

His Ile Asp Phe Asp Asp Leu Asn Trp Gln Thr Arg Lys Tyr Asn 185 190 195

Thr Lys Ala Ala Tyr Cys Gln Ser Lys Leu Ala Ile Val Leu Phe 200 205 210

Thr Lys Glu Leu Ser Arg Arg Leu Gln Gly Ser Gly Val Thr Val 215 220 225

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Asn Ala Leu His Pro Gly Val Ala Arg Thr Glu Leu Gly Arg His
                230
Thr Gly Ile His Gly Ser Thr Phe Ser Ser Thr Thr Leu Gly Pro
                245
                                                         255
Ile Phe Trp Leu Leu Val Lys Ser Pro Glu Leu Ala Ala Gln Pro
                                                         270
Ser Thr Tyr Leu Ala Val Ala Glu Glu Leu Ala Asp Val Ser Gly
                275
                                     280
                                                         285
Lys Tyr Phe Asp Gly Leu Lys Gln Lys Ala Pro Ala Pro Glu Ala
                290
                                                         300
Glu Asp Glu Glu Val Ala Arg Arg Leu Trp Ala Glu Ser Ala Arg
                305
                                     310
Leu Val Gly Leu Glu Ala Pro Ser Val Arq Glu Gln Pro Leu Pro
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<210> 117

<211> 2249

<212> DNA

<213> Homo sapiens

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agatgccttg gatcacttgg cctttgctta tttccgggca ggaaatgttt 750 cgtgtgccct cagcctctct cgggagtttc ttctctacag cccagataat 800 aagaggatgg ccaggaatgt cttgaaatat gaaaggctct tggcagagag 850 ccccaaccac gtggtagctg aggctgtcat ccagaggccc aatatacccc 900 acctgcagac cagagacacc tacgaggggc tatgtcagac cctgggttcc 950 cageceaete tetaceagat ecetageete taetgtteet atgagaceaa 1000 ttccaacgcc tacctgctgc tccagcccat ccggaaggag gtcatccacc 1050 tggagcccta cattgctctc taccatgact tcgtcagtga ctcagaggct 1100 cagaaaatta gagaacttgc agaaccatgg ctacagaggt cagtggtggc 1150 atcaggggag aagcagttac aagtggagta ccgcatcagc aaaagtgcct 1200 ggctgaagga cactgttgac ccaaaactgg tgaccctcaa ccaccgcatt 1250 gctgccctca caggccttga tgtccggcct ccctatgcag agtatctgca 1300 ggtggtgaac tatggcatcg gaggacacta tgagcctcac tttgaccatg 1350 ctacgtcacc aagcagcccc ctctacagaa tgaagtcagg aaaccgagtt 1400 gcaacattta tgatctatct gagctcggtg gaagctggag gagccacagc 1450 cttcatctat gccaacctca gcgtgcctgt ggttaggaat gcagcactgt 1500 tttggtggaa cctgcacagg agtggtgaag gggacagtga cacacttcat 1550 gctggctgtc ctgtcctggt gggagataag tgggtggcca acaagtggat 1600 acatgagtat ggacaggaat teegcagaee etgeagetee ageeetgaag 1650 actgaactgt tggcagagag aagctggtgg agtcctgtgg ctttccagag 1700 aagccaggag ccaaaagctg gggtaggaga ggagaaagca gagcagcctc 1750 ctggaagaag gccttgtcag ctttgtctgt gcctcgcaaa tcagaggcaa 1800 gggagaggtt gttaccaggg gacactgaga atgtacattt gatctgcccc 1850 agccacggaa gtcagagtag gatgcacagt acaaaggagg ggggagtgga 1900 ggcctgagag ggaagtttct ggagttcaga tactctctgt tgggaacagg 1950 acatctcaac agtctcaggt tcgatcagtg ggtcttttgg cactttgaac 2000 cttgaccaca gggaccaaga agtggcaatg aggacacctg caggagggc 2050 tagcctgact cccagaactt taagactttc tccccactgc cttctgctgc 2100 agcccaagca gggagtgtcc ccctcccaga agcatatccc agatgagtgg 2150

<210> 118

<211> 544

<212> PRT

<213> Homo sapiens

<400> 118

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Leu Gly Thr Gly Asp Pro Glu Arg Ala Ala Ala Arg Gly Asp Thr 20 25 30

Phe Ser Ala Leu Thr Ser Val Ala Arg Ala Leu Ala Pro Glu Arg 35 40 45

Arg Leu Leu Gly Leu Leu Arg Arg Tyr Leu Arg Gly Glu Glu Ala 50 55 60

Arg Leu Arg Asp Leu Thr Arg Phe Tyr Asp Lys Val Leu Ser Leu 65 70 75

His Glu Asp Ser Thr Thr Pro Val Ala Asn Pro Leu Leu Ala Phe
80 85 90

Thr Leu Ile Lys Arg Leu Gln Ser Asp Trp Arg Asn Val Val His 95 100 105

Ser Leu Glu Ala Ser Glu Asn Ile Arg Ala Leu Lys Asp Gly Tyr 110 115 120

Glu Lys Val Glu Gln Asp Leu Pro Ala Phe Glu Asp Leu Glu Gly
125 130 135

Ala Ala Arg Ala Leu Met Arg Leu Gln Asp Val Tyr Met Leu Asn 140 145 150

Val Lys Gly Leu Ala Arg Gly Val Phe Gln Arg Val Thr Gly Ser 155 160 165

Ala Ile Thr Asp Leu Tyr Ser Pro Lys Arg Leu Phe Ser Leu Thr 170 175 180

Gly Asp Asp Cys Phe Gln Val Gly Lys Val Ala Tyr Asp Met Gly 185 190 195

Asp Tyr Tyr His Ala Ile Pro Trp Leu Glu Glu Ala Val Ser Leu 200 205 210

Phe Arg Gly Ser Tyr Gly Glu Trp Lys Thr Glu Asp Glu Ala Ser 215 220 225

Leu Glu Asp Ala Leu Asp His Leu Ala Phe Ala Tyr Phe Arg Ala 230 235 240

Gly Asn Val Ser Cys Ala Leu Ser Leu Ser Arg Glu Phe Leu Leu Tyr Ser Pro Asp Asn Lys Arg Met Ala Arg Asn Val Leu Lys Tyr Glu Arg Leu Leu Ala Glu Ser Pro Asn His Val Val Ala Glu Ala Val Ile Gln Arg Pro Asn Ile Pro His Leu Gln Thr Arg Asp Thr Tyr Glu Gly Leu Cys Gln Thr Leu Gly Ser Gln Pro Thr Leu Tyr 310 315 Gln Ile Pro Ser Leu Tyr Cys Ser Tyr Glu Thr Asn Ser Asn Ala Tyr Leu Leu Gln Pro Ile Arg Lys Glu Val Ile His Leu Glu 335 Pro Tyr Ile Ala Leu Tyr His Asp Phe Val Ser Asp Ser Glu Ala 350 Gln Lys Ile Arg Glu Leu Ala Glu Pro Trp Leu Gln Arg Ser Val 365 Val Ala Ser Gly Glu Lys Gln Leu Gln Val Glu Tyr Arg Ile Ser 380 Lys Ser Ala Trp Leu Lys Asp Thr Val Asp Pro Lys Leu Val Thr 395 Leu Asn His Arg Ile Ala Ala Leu Thr Gly Leu Asp Val Arg Pro 410 Pro Tyr Ala Glu Tyr Leu Gln Val Val Asn Tyr Gly Ile Gly Gly 425 His Tyr Glu Pro His Phe Asp His Ala Thr Ser Pro Ser Ser Pro 440 445 Leu Tyr Arg Met Lys Ser Gly Asn Arg Val Ala Thr Phe Met Ile 455 Tyr Leu Ser Ser Val Glu Ala Gly Gly Ala Thr Ala Phe Ile Tyr 470 Ala Asn Leu Ser Val Pro Val Val Arg Asn Ala Ala Leu Phe Trp 485 Trp Asn Leu His Arg Ser Gly Glu Gly Asp Ser Asp Thr Leu His Ala Gly Cys Pro Val Leu Val Gly Asp Lys Trp Val Ala Asn Lys 515 525

Trp Ile His Glu Tyr Gly Gln Glu Phe Arg Arg Pro Cys Ser Ser

Ser Pro Glu Asp

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<210> 119
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- <211> 23
- <212> DNA
- <213> Artificial
- <220>
- <221> Artificial Sequence
- <222> 1-23
- <223> Synthetic construct.
- <400> 119
- cgggacagga gacccagaaa ggg 23
- <210> 120
- <211> 24
- <212> DNA
- <213> Artificial
- <220>

T.

fast.

57:

Mind H. H. Hugh

lad:

- <221> Artificial Sequence
- <222> 1-24
- <223> Synthetic construct.
- <400> 120
 - ggccaagtga tccaaggcat cttc 24
- <210> 121
- <211> 49
- <212> DNA
- <213> Artificial
- <220>
- <221> Artificial Sequence
- <222> 1-49
- <223> Synthetic construct.
- <400> 121
- ctgcgggacc tgactagatt ctacgacaag gtactttctt tgcatgggg 49
- <210> 122
- <211> 1778
- <212> DNA
- <213> Homo sapiens
- <400> 122
- gagataggga gtctgggttt aagttcctgc tccatctcag gagcccctgc 50
- tcccaccct aggaagccac cagactccac ggtgtggggc caatcaggtg 100
- gaatcggccc tggcaggtgg ggccacgagc gctggctgag ggaccgagcc 150
- ggagagecee ggageceegg taaceegege ggggagegee caggatgeeg 200

cgcggggact cggagcaggt gcgctactgc gcgcgcttct cctacctctg 250 gctcaagttt tcacttatca tctattccac cgtgttctgg ctgattgggg 300 ccctggtcct gtctgtgggc atctatgcag aggttgagcg gcagaaatat 350 aaaacccttg aaagtgcctt cctggctcca gccatcatcc tcatcctcct 400 gggcgtcgtc atgttcatgg tctccttcat tggtgtgctg gcgtccctcc 450 gtgacaacct gtaccttctc caagcattca tgtacatcct tgggatctgc 500 ctcatcatgg agctcattgg tggcgtggtg gccttgacct tccggaacca 550 gaccattgac ttcctgaacg acaacattcg aagaggaatt gagaactact 600 atgatgatct ggacttcaaa aacatcatgg actttgttca gaaaaagttc 650 aagtgctgtg gcggggagga ctaccgagat tggagcaaga atcagtacca 700 cgactgcagt gcccctggac ccctggcctg tggggtgccc tacacctgct 750 gcatcaggaa cacgacagaa gttgtcaaca ccatgtgtgg ctacaaaact 800 atcgacaagg agcgtttcag tgtgcaggat gtcatctacg tgcggggctg 850 caccaacgcc gtgatcatct ggttcatgga caactacacc atcatggcgt 900 gcatcctcct gggcatcctg cttccccagt tcctgggggt gctgctgacg 950 ctgctgtaca tcacccgggt ggaggacatc atcatggagc actctgtcac 1000 tgatgggctc ctggggcccg gtgccaagcc cagcgtggag gcggcaggca 1050 cgggatgctg cttgtgctac cccaattagg gcccagcctg ccatggcagc 1100 tccaacaagg accgtctggg atagcacctc tcagtcaaca tcgtggggct 1150 ggacagggct gcggcccctc tgcccacact cagtactgac caaagccagg 1200 gctgtgtgtg cctgtgtgta ggtcccacgg cctctgcctc cccagggagc 1250 agagcctggg cctcccctaa gaggctttcc ccgaggcagc tctggaatct 1300 gtgcccacct ggggcctggg gaacaaggcc ctcctttctc caggcctggg 1350 ctacagggga gggagagcct gaggctctgc tcagggccca tttcatctct 1400 ggcagtgcct tggcggtggt attcaaggca gttttgtagc acctgtaatt 1450 ggggagaggg agtgtgcccc tcggggcagg agggaagggc atctggggaa 1500 gggcaggagg gaagagctgt ccatgcagcc acgcccatgg ccaggttggc 1550 ctcttctcag cctcccaggt gccttgagcc ctcttgcaag ggcggctgct 1600 tccttgagcc tagttttttt ttacgtgatt tttgtaacat tcatttttt 1650

gtacagataa caggagtttc tgactaatca aagctggtat ttccccgcat 1700 gtcttattct tgcccttccc ccaaccagtt tgttaatcaa acaataaaaa 1750 catgttttgt tttgttttta aaaaaaaa 1778

<210> 123

<211> 294

<212> PRT

<213> Homo sapiens

<400> 123

Met Pro Arg Gly Asp Ser Glu Gln Val Arg Tyr Cys Ala Arg Phe
1 5 10 15

Ser Tyr Leu Trp Leu Lys Phe Ser Leu Ile Ile Tyr Ser Thr Val 20 25 30

Phe Trp Leu Ile Gly Ala Leu Val Leu Ser Val Gly Ile Tyr Ala 35 40 45

Glu Val Glu Arg Gln Lys Tyr Lys Thr Leu Glu Ser Ala Phe Leu
50 55 60

Ala Pro Ala Ile Ile Leu Ile Leu Gly Val Val Met Phe Met
65 70 75

Val Ser Phe Ile Gly Val Leu Ala Ser Leu Arg Asp Asn Leu Tyr 80 85 90

Leu Leu Gln Ala Phe Met Tyr Ile Leu Gly Ile Cys Leu Ile Met 95 100 105

Glu Leu Ile Gly Gly Val Val Ala Leu Thr Phe Arg Asn Gln Thr 110 115 120

Ile Asp Phe Leu Asn Asp Asn Ile Arg Arg Gly Ile Glu Asn Tyr 125 130 135

Tyr Asp Asp Leu Asp Phe Lys Asn Ile Met Asp Phe Val Gln Lys 140 145 150

Lys Phe Lys Cys Cys Gly Gly Glu Asp Tyr Arg Asp Trp Ser Lys 155 160 165

Asn Gln Tyr His Asp Cys Ser Ala Pro Gly Pro Leu Ala Cys Gly 170 175 180

Val Pro Tyr Thr Cys Cys Ile Arg Asn Thr Thr Glu Val Val Asn 185 190 195

Thr Met Cys Gly Tyr Lys Thr Ile Asp Lys Glu Arg Phe Ser Val 200 205 210

Gln Asp Val Ile Tyr Val Arg Gly Cys Thr Asn Ala Val Ile Ile 215 220 225

Trp Phe Met Asp Asn Tyr Thr Ile Met Ala Cys Ile Leu Leu Gly

230 235 240 Ile Leu Leu Pro Gln Phe Leu Gly Val Leu Leu Thr Leu Leu Tyr Ile Thr Arg Val Glu Asp Ile Ile Met Glu His Ser Val Thr Asp Gly Leu Leu Gly Pro Gly Ala Lys Pro Ser Val Glu Ala Ala Gly 280 Thr Gly Cys Cys Leu Cys Tyr Pro Asn 290 <210> 124 <211> 25 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-25 <223> Synthetic construct. <400> 124 atcatctatt ccaccgtgtt ctggc 25 <210> 125 <211> 25 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-25 <223> Synthetic construct. <400> 125 gacagagtgc tccatgatga tgtcc 25 <210> 126 <211> 50 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-50 <223> Synthetic construct. <400> 126 cctgtctgtg ggcatctatg cagaggttga gcggcagaaa tataaaaccc 50 <210> 127 <211> 1636 <212> DNA <213> Homo sapiens

<400> 127 gaggagcggg ccgaggactc cagcgtgccc aggtctggca tcctgcactt 50 gctgccctct gacacctggg aagatggccg gcccgtggac cttcaccctt 100 ctctgtggtt tgctggcagc caccttgatc caagccaccc tcagtcccac 150 tgcagttctc atcctcggcc caaaagtcat caaagaaaag ctgacacagg 200 agctgaagga ccacaacgcc accagcatcc tgcagcagct gccgctgctc 250 agtgccatgc gggaaaagcc agccggaggc atccctgtgc tgggcagcct 300 ggtgaacacc gtcctgaagc acatcatctg gctgaaggtc atcacagcta 350 acatecteca getgeaggtg aageeetegg ceaatgacea ggagetgeta 400 gtcaagatcc ccctggacat ggtggctgga ttcaacacgc ccctggtcaa 450 gaccatcgtg gagttccaca tgacgactga ggcccaagcc accatccgca 500 tggacaccag tgcaagtggc cccacccgcc tggtcctcag tgactgtgcc 550 accagccatg ggagcctgcg catccaactg ctgtataagc tctccttcct 600 ggtgaacgcc ttagctaagc aggtcatgaa cctcctagtg ccatccctgc 650 ccaatctagt gaaaaaccag ctgtgtcccg tgatcgaggc ttccttcaat 700 ggcatgtatg cagacetect geagetggtg aaggtgeeca ttteeeteag 750 cattgaccgt ctggagtttg accttctgta tcctgccatc aagggtgaca 803 ccattcagct ctacctgggg gccaagttgt tggactcaca gggaaaggtg 850 accaagtggt tcaataactc tgcagcttcc ctgacaatgc ccaccctgga 900 caacatcccg ttcagcctca tcgtgagtca ggacgtggtg aaagctgcag 950 tggctgctgt gctctctcca gaagaattca tggtcctgtt ggactctgtg 1000 cttcctgaga gtgcccatcg gctgaagtca agcatcgggc tgatcaatga 1050 aaaggctgca gataagctgg gatctaccca gatcgtgaag atcctaactc 1100 aggacactcc cgagtttttt atagaccaag gccatgccaa ggtggcccaa 1150 ctgatcgtgc tggaagtgtt tccctccagt gaagccctcc gccctttgtt 1200 caccetggge ategaageca geteggaage teagttttae accaaaggtg 1250 accaacttat actcaacttg aataacatca gctctgatcg gatccagctg 1300 atgaactctg ggattggctg gttccaacct gatgttctga aaaacatcat 1350 cactgagatc atccactcca tcctgctgcc gaaccagaat ggcaaattaa 1400 gatctggggt cccagtgtca ttggtgaagg ccttgggatt cgaggcagct 1450

gaatcctcac tgaccaagga tgcccttgtg cttactccag cctccttgtg 1500 gaaacccagc tctcctgtct cccagtgaag acttggatgg cagccatcag 1550 ggaaggctgg gtcccagctg ggagtatggg tgtgagctct atagaccatc 1600 cctctctgca atcaataaac acttgcctgt gaaaaa 1636

<210> 128

<211> 484

<212> PRT

<213> Homo sapiens

<400> 128

Met Ala Gly Pro Trp Thr Phe Thr Leu Leu Cys Gly Leu Leu Ala
1 5 10 15

Ala Thr Leu Ile Gln Ala Thr Leu Ser Pro Thr Ala Val Leu Ile 20 25 30

Leu Gly Pro Lys Val Ile Lys Glu Lys Leu Thr Gln Glu Leu Lys
35 40 45

Asp His Asn Ala Thr Ser Ile Leu Gln Gln Leu Pro Leu Leu Ser 50 55 60

Ala Met Arg Glu Lys Pro Ala Gly Gly Ile Pro Val Leu Gly Ser 65 70 75

Leu Val Asn Thr Val Leu Lys His Ile Ile Trp Leu Lys Val Ile 80 85 90

Thr Ala Asn Ile Leu Gln Leu Gln Val Lys Pro Ser Ala Asn Asp $95 \hspace{1.5cm} 100 \hspace{1.5cm} 105$

Gln Glu Leu Leu Val Lys Ile Pro Leu Asp Met Val Ala Gly Phe 110 115 120

Asn Thr Pro Leu Val Lys Thr Ile Val Glu Phe His Met Thr Thr 125 130 135

Glu Ala Gln Ala Thr Ile Arg Met Asp Thr Ser Ala Ser Gly Pro 140 145 150

Thr Arg Leu Val Leu Ser Asp Cys Ala Thr Ser His Gly Ser Leu 155 160 165

Arg Ile Gln Leu Leu Tyr Lys Leu Ser Phe Leu Val Asn Ala Leu 170 175 180

Ala Lys Gln Val Met Asn Leu Leu Val Pro Ser Leu Pro Asn Leu
185 190 195

Val Lys Asn Gln Leu Cys Pro Val Ile Glu Ala Ser Phe Asn Gly 200 205 210

Met Tyr Ala Asp Leu Leu Gln Leu Val Lys Val Pro Ile Ser Leu 215 $^{\circ}$ 220 225

Ser Ile	Asp	Arg	Leu 230	Glu	Phe	Asp	Leu	Leu 235	Tyr	Pro	Ala	Ile	Lys 240
Gly Asp	Thr	Ile	Gln 245	Leu	Tyr	Leu	Gly	Ala 250	Lys	Leu	Leu	Asp	Ser 255
Gln Gly	Lys	Val	Thr 260	Lys	Trp	Phe	Asn	Asn 265	Ser	Ala	Ala	Ser	Leu 270
Thr Met	Pro	Thr	Leu 275	Asp	Asn	Ile	Pro	Phe 280	Ser	Leu	Ile	Val	Ser 285
Gln Asp	Val	Val	Lys 290	Ala	Ala	Val	Ala	Ala 295	Val	Leu	Ser	Pro	Glu 300
Glu Phe	Met	Val	Leu 305	Leu	Asp	Ser	Val	Leu 310	Pro	Glu	Ser	Ala	His 315
Arg Leu	Lys	Ser	Ser 320	Ile	Gly	Leu	Ile	Asn 325	Glu	Lys	Ala	Ala	Asp 330
Lys Leu	Gly	Ser	Thr 335	Gln	Ile	Val	Lys	Ile 340	Leu	Thr	Gln	Asp	Thr 345
Pro Glu	Phe	Phe	Ile 350	Asp	Gln	Gly	His	Ala 355	Lys	Val	Ala	Gln	Leu 360
Ile Val	Leu	Glu	Val 365	Phe	Pro	Ser	Ser	Glu 370	Ala	Leu	Arg	Pro	Leu 375
Phe Thr	Leu	Gly	Ile 380	Glu	Ala	Ser	Ser	Glu 385	Ala	Gln	Phe	Tyr	Thr 390
Lys Gly	Asp	Gln	Leu 395	Ile	Leu	Asn	Leu	Asn 400	Asn	Ile	Ser	Ser	Asp 405
Arg Ile	Gln	Leu	Met 410	Asn	Ser	Gly	Ile	Gly 415	Trp	Phe	Gln	Pro	Asp 420
Val Leu	Lys	Asn	Ile 425	Ile	Thr	Glu	Ile	Ile 430	His	Ser	Ile	Leu	Leu 435
Pro Asn	Gln	Asn	Gly 440	Lys	Leu	Arg	Ser	Gly 445	Val	Pro	Val	Ser	Leu 450
Val Lys	Ala	Leu	Gly 455	Phe	Glu	Ala	Ala	Glu 460	Ser	Ser	Leu	Thr	Lys 465
Asp Ala	Leu	Val	Leu 470	Thr	Pro	Ala	Ser	Leu 475	Trp	Lys	Pro	Ser	Ser 480

Pro Val Ser Gln

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<210> 130

<211> 335

<212> PRT

<213> Homo sapiens

<400> 130

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Val Ala Leu Leu Ile Val Cys Asp Val Pro Ser Ala Ser Ala Gln
20 25 30

Arg Lys Lys Glu Met Val Leu Ser Glu Lys Val Ser Gln Leu Met 35 40 45

Glu Trp Thr Asn Lys Arg Pro Val Ile Arg Met Asn Gly Asp Lys
50 55 60

Phe Arg Arg Leu Val Lys Ala Pro Pro Arg Asn Tyr Ser Val Ile
65 70 75

Val Met Phe Thr Ala Leu Gln Leu His Arg Gln Cys Val Val Cys 80 85 90

Lys Gln Ala Asp Glu Glu Phe Gln Ile Leu Ala Asn Ser Trp Arg 95 100 105

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Tyr Ser Ser Ala Phe Thr Asn Arg Ile Phe Phe Ala Met Val Asp
                110
Phe Asp Glu Gly Ser Asp Val Phe Gln Met Leu Asn Met Asn Ser
Ala Pro Thr Phe Ile Asn Phe Pro Ala Lys Gly Lys Pro Lys Arg
Gly Asp Thr Tyr Glu Leu Gln Val Arg Gly Phe Ser Ala Glu Gln
                155
                                    160
Ile Ala Arg Trp Ile Ala Asp Arg Thr Asp Val Asn Ile Arg Val
                170
Ile Arg Pro Pro Asn Tyr Ala Gly Pro Leu Met Leu Gly Leu Leu
                185
Leu Ala Val Ile Gly Gly Leu Val Tyr Leu Arg Arg Ser Asn Met
                                                         210
Glu Phe Leu Phe Asn Lys Thr Gly Trp Ala Phe Ala Ala Leu Cys
Phe Val Leu Ala Met Thr Ser Gly Gln Met Trp Asn His Ile Arg
                                                         240
Gly Pro Pro Tyr Ala His Lys Asn Pro His Thr Gly His Val Asn
Tyr Ile His Gly Ser Ser Gln Ala Gln Phe Val Ala Glu Thr His
                                                         270
Ile Val Leu Leu Phe Asn Gly Gly Val Thr Leu Gly Met Val Leu
Leu Cys Glu Ala Ala Thr Ser Asp Met Asp Ile Gly Lys Arg Lys
                290
                                                         300
Ile Met Cys Val Ala Gly Ile Gly Leu Val Val Leu Phe Phe Ser
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Trp Met Leu Ser Ile Phe Arg Ser Lys Tyr His Gly Tyr Pro Tyr
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Ser Phe Leu Met Ser
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<210> 131

<211> 2476

<212> DNA

<213> Homo sapiens

<400> 131

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<210> 132

<211> 536

<212> PRT

<213> Homo sapiens

<400> 132

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Val Leu Ala Pro Gly Ala Gly Glu Gln Arg Arg Ala Ala Lys 20 25 30

Ala Pro Asn Val Val Leu Val Val Ser Asp Ser Phe Asp Gly Arg 35 40 45

Leu Thr Phe His Pro Gly Ser Gln Val Val Lys Leu Pro Phe Ile 50 55 60

Asn Phe Met Lys Thr Arg Gly Thr Ser Phe Leu Asn Ala Tyr Thr $65 \hspace{1cm} 70 \hspace{1cm} 75$

Asn Ser Pro Ile Cys Cys Pro Ser Arg Ala Ala Met Trp Ser Gly Leu Phe Thr His Leu Thr Glu Ser Trp Asn Asn Phe Lys Gly Leu Asp Pro Asn Tyr Thr Trp Met Asp Val Met Glu Arg His Gly 110 Tyr Arg Thr Gln Lys Phe Gly Lys Leu Asp Tyr Thr Ser Gly His His Ser Ile Ser Asn Arg Val Glu Ala Trp Thr Arg Asp Val Ala 140 Phe Leu Leu Arg Gln Glu Gly Arg Pro Met Val Asn Leu Ile Arg 160 Asn Arg Thr Lys Val Arg Val Met Glu Arg Asp Trp Gln Asn Thr 180 Asp Lys Ala Val Asn Trp Leu Arg Lys Glu Ala Ile Asn Tyr Thr Glu Pro Phe Val Ile Tyr Leu Gly Leu Asn Leu Pro His Pro Tyr Pro Ser Pro Ser Ser Gly Glu Asn Phe Gly Ser Ser Thr Phe His Thr Ser Leu Tyr Trp Leu Glu Lys Val Ser His Asp Ala Ile Lys Ile Pro Lys Trp Ser Pro Leu Ser Glu Met His Pro Val Asp Tyr Tyr Ser Ser Tyr Thr Lys Asn Cys Thr Gly Arg Phe Thr Lys Lys 260 270 Glu Ile Lys Asn Ile Arg Ala Phe Tyr Tyr Ala Met Cys Ala Glu Thr Asp Ala Met Leu Gly Glu Ile Ile Leu Ala Leu His Gln Leu 300 Asp Leu Leu Gln Lys Thr Ile Val Ile Tyr Ser Ser Asp His Gly Glu Leu Ala Met Glu His Arg Gln Phe Tyr Lys Met Ser Met Tyr 330 Glu Ala Ser Ala His Val Pro Leu Leu Met Met Gly Pro Gly Ile Lys Ala Gly Leu Gln Val Ser Asn Val Val Ser Leu Val Asp Ile 360 Tyr Pro Thr Met Leu Asp Ile Ala Gly Ile Pro Leu Pro Gln Asn

				365					370					375
Leu	Ser	Gly	Tyr	Ser 380	Leu	Leu	Pro	Leu	Ser 385	Ser	Glu	Thr	Phe	Lys 390
Asn	Glu	His	Lys	Val 395	Lys	Asn	Leu	His	Pro 400	Pro	Trp	Ile	Leu	Ser 405
Glu	Phe	His	Gly	Cys 410	Asn	Val	Asn	Ala	Ser 415	Thr	Tyr	Met	Leu	Arg 420
Thr	Asn	His	Trp	Lys 425	Tyr	Ile	Ala	Tyr	Ser 430	Asp	Gly	Ala	Ser	Ile 435
Leu	Pro	Gln	Leu	Phe 440	Asp	Leu	Ser	Ser	Asp 445	Pro	Asp	Glu	Leu	Thr 450
Asn	Val	Ala	Val	Lys 455	Phe	Pro	Glu	Ile	Thr 460	Tyr	Ser	Leu	Asp	Gln 465
Lys	Leu	His	Ser	Ile 470	Ile	Asn	Tyr	Pro	Lys 475	Val	Ser	Ala	Ser	Val 480
His	Gln	Tyr	Asn	Lys 485	Glu	Gln	Phe	Ile	Lys 490	Trp	Lys	Gln	Ser	Ile 495
Gly	Gln	Asn	Tyr	Ser 500	Asn	Val	Ile	Ala	Asn 505	Leu	Arg	Trp	His	Gln 510
Asp	Trp	Gln	Lys	Glu 515	Pro	Arg	Lys	Tyr	Glu 520	Asn	Ala	Ile	Asp	Gln 525
Trp	Leu	Lys	Thr	His 530	Met	Asn	Pro	Arg	Ala 535	Val				
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<213> Homo sapiens

<400> 133

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atcccgagcc aaagacagag tggcggtagc aggtggagtc tttttcatcc 500 ttggaggcct cctgggattc attcctgttg cctggaatct tcatgggatc 550 ctacqqqact tctactcacc actqqtqcct qacaqcatqa aatttqaqat 600 tggagaggct ctttacttgg gcattatttc ttccctgttc tccctgatag 650 ctggaatcat cctctgcttt tcctgctcat cccagagaaa tcgctccaac 700 tactacgatg cctaccaagc ccaacctctt gccacaagga gctctccaag 750 qcctqqtcaa cctcccaaaq tcaaqaqtqa qttcaattcc tacaqcctqa 800 cagggtatgt gtgaagaacc aggggccaga gctgggggt ggctgggtct 850 gtgaaaaaca gtggacagca ccccgagggc cacaggtgag ggacactacc 900 actggatcgt gtcagaaggt gctgctgagg atagactgac tttggccatt 950 ggattgagca aaggcagaaa tgggggctag tgtaacagca tgcaggttga 1000 attgccaagg atgctcgcca tgccagcctt tctgttttcc tcaccttgct 1050 gctcccctgc cctaagtccc caaccctcaa cttgaaaccc cattccctta 1100 agocaggact cagaggatec etttgeeete tggtttacet gggacteeat 1150 ccccaaaccc actaatcaca tcccactgac tgaccctctg tgatcaaaga 1200 ccctctctct ggctgaggtt ggctcttagc tcattgctgg ggatgggaag 1250 gagaagcagt ggcttttgtg ggcattgctc taacctactt ctcaagcttc 1300 cctccaaaga aactgattgg ccctggaacc tccatcccac tcttgttatg 1350 actecacagt gtecagaeta atttgtgeat gaactgaaat aaaaccatee 1400 tacqqtatcc aqqqaacaqa aaqcaqqatq caqqatqqqa qqacaqqaaq 1450 gcagcctggg acatttaaaa aaata 1475

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<211> 230

<212> PRT

<213> Homo sapiens

<400> 134

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Leu Gly Leu Leu Gly Thr Leu Val Ala Met Leu Leu Pro Ser Trp
20 25 30

Lys Thr Ser Ser Tyr Val Gly Ala Ser Ile Val Thr Ala Val Gly 35 40 45

Phe Ser Lys Gly Leu Trp Met Glu Cys Ala Thr His Ser Thr Gly

50 55 60

Ile Thr Gln Cys Asp Ile Tyr Ser Thr Leu Leu Gly Leu Pro Ala 65 70 75

Asp Ile Gln Ala Ala Gln Ala Met Met Val Thr Ser Ser Ala Ile 80 85 90

Ser Ser Leu Ala Cys Ile Ile Ser Val Val Gly Met Arg Cys Thr 95 100 105

Val Phe Cys Gln Glu Ser Arg Ala Lys Asp Arg Val Ala Val Ala 110 115 120

Gly Gly Val Phe Phe Ile Leu Gly Gly Leu Leu Gly Phe Ile Pro 125 130 135

Val Ala Trp Asn Leu His Gly Ile Leu Arg Asp Phe Tyr Ser Pro 140 145 150

Leu Val Pro Asp Ser Met Lys Phe Glu Ile Gly Glu Ala Leu Tyr 155 160 165

Leu Gly Ile Ile Ser Ser Leu Phe Ser Leu Ile Ala Gly Ile Ile 170 175 180

Leu Cys Phe Ser Cys Ser Ser Gln Arg Asn Arg Ser Asn Tyr Tyr 185 190 195

Asp Ala Tyr Gln Ala Gln Pro Leu Ala Thr Arg Ser Ser Pro Arg 200 205 210

Pro Gly Gln Pro Pro Lys Val Lys Ser Glu Phe Asn Ser Tyr Ser 215 220 225

Leu Thr Gly Tyr Val 230

<210> 135

<211> 610

<212> DNA

<213> Homo sapiens

<400> 135

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<210> 136

<211> 119

<212> PRT

<213> Homo sapiens

<400> 136

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Leu Leu Cys Pro Arg Glu Val Ile Ala Pro Ala Gly Ser Glu 20 25 30

Pro Trp Leu Cys Gln Pro Ala Pro Arg Cys Gly Asp Lys Ile Tyr 35 40 45

Asn Pro Leu Glu Gln Cys Cys Tyr Asn Asp Ala Ile Val Ser Leu
50 55 60

Ser Glu Thr Arg Gln Cys Gly Pro Pro Cys Thr Phe Trp Pro Cys
65 70 75

Phe Glu Leu Cys Cys Leu Asp Ser Phe Gly Leu Thr Asn Asp Phe 80 85 90

Val Val Lys Leu Lys Val Gln Gly Val Asn Ser Gln Cys His Ser 95 100 105

Ser Pro Ile Ser Ser Lys Cys Glu Ser Arg Arg Phe Pro 110 115

<210> 137

<211> 771

<212> DNA

<213> Homo sapiens

<400> 137

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ctgctttgag cagtgctgcc cctggacctt catggtgaag ctgataaacc 300 agaactgcga ctcagcccgg acctcggatg acaggctttg tcgcagtgtc 350 agctaatgga acatcagggg aacgatgact cctggattct ccttcctggg 400 tgggcctgga gaaagaggct ggtgttacct gagatctggg atgctgagtg 450 gctgtttggg ggccagagaa acacacactc aactgcccac ttcattctgt 500 gacctgtctg aggcccaccc tgcagctgcc ctgaggaggc ccacaggtcc 550 ccttctagaa ttctggacag catgagatg gtgtgctgat gggggcccag 600 ggactctgaa ccctcctgat gacccctatg gccaacatca acccggcacc 650 accccaaggc tggctggga acccttcacc cttctgtgag attttccatc 700 atctcaagtt ctcttctatc caggagcaaa gcacaggatc ataataaatt 750 tatgtacttt ataaatgaaa a 771

<210> 138

<211> 110

<212> PRT

<213> Homo sapiens

<400> 138

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Ile Ser Arg Leu Cys Ser His Gly Ala Pro Val Ala Pro Met 20 25 30

Thr Pro Tyr Leu Met Leu Cys Gln Pro His Lys Arg Cys Gly Asp 35 40 45

Lys Phe Tyr Asp Pro Leu Gln His Cys Cys Tyr Asp Asp Ala Val 50 55 60

Val Pro Leu Ala Arg Thr Gln Thr Cys Gly Asn Cys Thr Phe Arg
65 70 75

Val Cys Phe Glu Gln Cys Cys Pro Trp Thr Phe Met Val Lys Leu .80 85 90

Ile Asn Gln Asn Cys Asp Ser Ala Arg Thr Ser Asp Asp Arg Leu
95 100 105

Cys Arg Ser Val Ser 110

<210> 139

<211> 2044

<212> DNA

<213> Homo sapiens

<400> 139

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- <210> 140
- <211> 311
- <212> PRT
- <213> Homo sapiens
- <400> 140
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- Ser Leu Leu Phe Ala Leu Phe Leu Ala Ala Ser Leu Gly Pro Val 20 25 30
- Ala Ala Phe Lys Val Ala Thr Pro Tyr Ser Leu Tyr Val Cys Pro 35 40 45
- Glu Gly Gln Asn Val Thr Leu Thr Cys Arg Leu Leu Gly Pro Val
 50 55 60
- Asp Lys Gly His Asp Val Thr Phe Tyr Lys Thr Trp Tyr Arg Ser 65 70 75
- Ser Arg Gly Glu Val Gln Thr Cys Ser Glu Arg Arg Pro Ile Arg 80 85 90
- Asn Leu Thr Phe Gln Asp Leu His Leu His His Gly Gly His Gln 95 100 105
- Ala Ala Asn Thr Ser His Asp Leu Ala Gln Arg His Gly Leu Glu 110 115 120
- Ser Ala Ser Asp His His Gly Asn Phe Ser Ile Thr Met Arg Asn $125 \hspace{1.5cm} 130 \hspace{1.5cm} 135$
- Leu Thr Leu Leu Asp Ser Gly Leu Tyr Cys Cys Leu Val Val Glu

				140					145					150
Ile	Arg	His	His	His 155	Ser	Glu	His	Arg	Val 160	His	Gly	Ala	Met	Glu 165
Leu	Gln	Val	Gln	Thr 170	Gly	Lys	Asp	Ala	Pro 175	Ser	Asn	Cys	Val	Val 180
Tyr	Pro	Ser	Ser	Ser 185	Gln	Asp	Ser	Glu	Asn 190	Ile	Thr	Ala	Ala	Ala 195
Leu	Ala	Thr	Gly	Ala 200	Cys	Ile	Val	Gly	Ile 205	Leu	Cys	Leu	Pro	Leu 210
Ile	Leu	Leu	Leu	Val 215	Tyr	Lys	Gln	Arg	Gln 220	Ala	Ala	Ser	Asn	Arg 225
Arg	Ala	Gln	Glu	Leu 230	Val	Arg	Met	Asp	Ser 235	Asn	Ile	Gln	Gly	Ile 240
Glu	Asn	Pro	Gly	Phe 245	Glu	Ala	Ser	Pro	Pro 250	Ala	Gln	Gly	Ile	Pro 255
Glu	Ala	Lys	Val	Arg 260	His	Pro	Leu	Ser	Tyr 265	Val	Ala	Gln	Arg	Gln 270
Pro	Ser	Glu	Ser	Gly 275	Arg	His	Leu	Leu	Ser 280	Glu	Pro	Ser	Thr	Pro 285
Leu	Ser	Pro	Pro	Gly 290	Pro	Gly	Asp	Val	Phe 295	Phe	Pro	Ser	Leu	Asp 300
Pro	Val	Pro	Asp	Ser 305	Pro	Asn	Phe	Glu	Val 310	Ile				

<210> 141

<211> 1732

<212> DNA

<213> Homo sapiens

<400> 141

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cttagacctc ccttcctgcc ctcctttcct gcccaccgct gcttcctggc 150
ccttctccga ccccgctcta gcagcagacc tcctggggtc tgtgggttga 200
tctgtggccc ctgtgcctcc gtgtcctttt cgtctccctt cctcccgact 250
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agatactccc ccggcgagag ctggcacccc tacttggagc cacaaggcct 450

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cagcaatgct gtcccaagtg tgtggaacct cacactccct ctggactccg 600
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agatetteag tgeceatgag etgtteeeet eeegeetgee caaceagtgt 700
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ggccagtcca gacaaagtga ccaagacata acaaagacct aacagttgca 1650
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cattaccctc aaaaaaaaaa aaaaaaaaaa aa 1732
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<210> 142

<211> 451

<212> PRT

<213> Homo sapiens

<400> 142

Met Val Pro Glu Val Arg Val Leu Ser Ser Leu Leu Gly Leu Ala Leu Leu Trp Phe Pro Leu Asp Ser His Ala Arg Ala Arg Pro Asp Met Phe Cys Leu Phe His Gly Lys Arg Tyr Ser Pro Gly Glu Ser Trp His Pro Tyr Leu Glu Pro Gln Gly Leu Met Tyr Cys Leu Arg Cys Thr Cys Ser Glu Gly Ala His Val Ser Cys Tyr Arg Leu His Cys Pro Pro Val His Cys Pro Gln Pro Val Thr Glu Pro Gln Gln Cys Cys Pro Lys Cys Val Glu Pro His Thr Pro Ser Gly Leu Arg Ala Pro Pro Lys Ser Cys Gln His Asn Gly Thr Met Tyr Gln His Gly Glu Ile Phe Ser Ala His Glu Leu Phe Pro Ser Arg Leu Pro 135 Asn Gln Cys Val Leu Cys Ser Cys Thr Glu Gly Gln Ile Tyr Cys Gly Leu Thr Thr Cys Pro Glu Pro Gly Cys Pro Ala Pro Leu Pro 155 165 Leu Pro Asp Ser Cys Cys Gln Ala Cys Lys Asp Glu Ala Ser Glu Gln Ser Asp Glu Glu Asp Ser Val Gln Ser Leu His Gly Val Arg 185 190 195 His Pro Gln Asp Pro Cys Ser Ser Asp Ala Gly Arg Lys Arg Gly Pro Gly Thr Pro Ala Pro Thr Gly Leu Ser Ala Pro Leu Ser Phe 225 Ile Pro Arg His Phe Arg Pro Lys Gly Ala Gly Ser Thr Thr Val Lys Ile Val Leu Lys Glu Lys His Lys Lys Ala Cys Val His Gly 255 Gly Lys Thr Tyr Ser His Gly Glu Val Trp His Pro Ala Phe Arg Ala Phe Gly Pro Leu Pro Cys Ile Leu Cys Thr Cys Glu Asp Gly 285 Arg Gln Asp Cys Gln Arg Val Thr Cys Pro Thr Glu Tyr Pro Cys

	290	295		300
Arg His Pro Glu	Lys Val Ala 305	Gly Lys Cys C 310	ys Lys Ile Cy	rs Pro 315
Glu Asp Lys Ala	Asp Pro Gly 320	His Ser Glu I 325	le Ser Ser Th	r Arg 330
Cys Pro Lys Ala	Pro Gly Arg 335	Val Leu Val H 340	lis Thr Ser Va	l Ser 345
Pro Ser Pro Asp	Asn Leu Arg 350	Arg Phe Ala L 355	eu Glu His Gl	u Ala 360
Ser Asp Leu Val	Glu Ile Tyr 365	Leu Trp Lys L 370	eu Val Lys As	p Glu 375
Glu Thr Glu Ala	Gln Arg Gly 380	Glu Val Pro G 385	ly Pro Arg Pr	o His 390
Ser Gln Asn Leu	Pro Leu Asp 395	Ser Asp Gln G 400	lu Ser Gln Gl	u Ala 405
Arg Leu Pro Glu	Arg Gly Thr 410	Ala Leu Pro T 415	hr Ala Arg Tr	p Pro 420
Pro Arg Arg Ser	Leu Glu Arg 425	Leu Pro Ser P	ro Asp Pro Gl	y Ala 435
Glu Gly His Gly	Gln Ser Arg 440	Gln Ser Asp G 445	In Asp Ile Th	r Lys 450
Thr				

<210> 143

<211> 693

<212> DNA

<213> Homo sapiens

<400> 143

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<210> 144

<211> 93

<212> PRT

<213> Homo sapiens

<400> 144

Met Asp Ser Leu Arg Lys Met Leu Ile Ser Val Ala Met Leu Gly
1 5 10 15

Ala Gly Ala Gly Val Gly Tyr Ala Leu Leu Val Ile Val Thr Pro 20 25 30

Gly Glu Arg Arg Lys Gln Glu Met Leu Lys Glu Met Pro Leu Gln 35 40 45

Asp Pro Arg Ser Arg Glu Glu Ala Ala Arg Thr Gln Gln Leu Leu
50 55 60

Leu Ala Thr Leu Gln Glu Ala Ala Thr Thr Gln Glu Asn Val Ala 65 70 75

Trp Arg Lys Asn Trp Met Val Gly Gly Glu Gly Gly Ala Ser Gly 80 85 90

Arg Ser Pro

<210> 145

<211> 1883

<212> DNA

<213> Homo sapiens

<400> 145

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caggctgcca tgggggcccag cacccctctc ctcatcttgt tccttttgtc 150
atggtcggga cccctccaag gacagcagca ccaccttgtg gagtacatgg 200
aacgccgact agctgcttta gaggaacggc tggcccagtg ccaggaccag 250
agtagtcggc atgctgctga gctgcgggac ttcaagaaca agatgctgcc 300
actgctggag gtggcagaga aggagcggga ggcactcaga actgaggccg 350
acaccatctc cgggagagtg gatcgtctgg agcgggaggt agactatctg 400

gagacccaga acccagctct gccctgtgta gagtttgatg agaaggtgac 450 tggaggccct gggaccaaag gcaagggaag aaggaatgag aagtacgata 500 tggtgacaga ctgtggctac acaatctctc aagtgagatc aatgaagatt 550 ctgaagcgat ttggtggccc agctggtcta tggaccaagg atccactggg 600 gcaaacagag aagatctacg tgttagatgg gacacagaat gacacagcct 650 ttgtcttccc aaggetgegt gacttcaccc ttgccatgge tgcccggaaa 700 getteeegag teegggtgee etteeeetgg gtaggeacag ggeagetggt 750 atatggtggc tttctttatt ttgctcggag gcctcctgga agacctggtg 800 gaggtggtga gatggagaac actttgcagc taatcaaatt ccacctggca 850 aaccgaacag tggtggacag ctcagtattc ccagcagagg ggctgatccc 900 cccctacggc ttgacagcag acacctacat cgacctggta gctgatgagg 950 aaggtetttg ggetgtetat gecaceeggg aggatgaeag geacttgtgt 1000 ctggccaagt tagatccaca gacactggac acagagcagc agtgggacac 1050 accatgtccc agagagaatg ctgaggctgc ctttgtcatc tgtgggaccc 1100 totatgtcgt ctataacacc cgtcctgcca gtcgggcccg catccagtgc 1150 tcctttgatg ccagcggcac cctgacccct gaacgggcag cactccctta 1200 ttttccccgc agatatggtg cccatgccag cctccgctat aacccccgag 1250 aacgccagct ctatgcctgg gatgatggct accagattgt ctataagctg 1300 gagatgagga agaaagagga ggaggtttga ggagctagcc ttgttttttg 1350 catctttctc actcccatac atttatatta tatccccact aaatttcttg 1400 ttcctcattc ttcaaatgtg ggccagttgt ggctcaaatc ctctatattt 1450 ttagccaatg gcaatcaaat tctttcagct cctttgtttc atacggaact 1500 ccagatcctg agtaatcctt ttagagcccg aagagtcaaa accctcaatg 1550 ttccctcctg ctctcctgcc ccatgtcaac aaatttcagg ctaaggatgc 1600 cccagaccca gggctctaac cttgtatgcg ggcaggccca gggagcaggc 1650 agcagtgttc ttcccctcag agtgacttgg ggagggagaa ataggaggag 1700 acgtccagct ctgtcctctc ttcctcactc ctcccttcag tgtcctgagg 1750 aacaggactt tctccacatt gttttgtatt gcaacatttt gcattaaaag 1800

aaaaaaaaa aaaaaaaaaa aaaaaaaaa aaa 1883

<210> 146

<211> 406

<212> PRT

<213> Homo sapiens

<400> 146

Met Gly Pro Ser Thr Pro Leu Leu Ile Leu Phe Leu Leu Ser Trp
1 5 10 15

Ser Gly Pro Leu Gln Gly Gln Gln His His Leu Val Glu Tyr Met $20 \\ 25 \\ 30$

Glu Arg Arg Leu Ala Ala Leu Glu Glu Arg Leu Ala Gln Cys Gln 35 40 45

Asp Gln Ser Ser Arg His Ala Ala Glu Leu Arg Asp Phe Lys Asn 50 55 60

Lys Met Leu Pro Leu Glu Val Ala Glu Lys Glu Arg Glu Ala 65 70 75

Leu Arg Thr Glu Ala Asp Thr Ile Ser Gly Arg Val Asp Arg Leu 80 85 90

Glu Arg Glu Val Asp Tyr Leu Glu Thr Gln Asn Pro Ala Leu Pro 95 100 105

Cys Val Glu Phe Asp Glu Lys Val Thr Gly Gly Pro Gly Thr Lys 110 115 120

Gly Lys Gly Arg Arg Asn Glu Lys Tyr Asp Met Val Thr Asp Cys 125 130 135

Gly Tyr Thr Ile Ser Gln Val Arg Ser Met Lys Ile Leu Lys Arg 140 145 150

Phe Gly Gly Pro Ala Gly Leu Trp Thr Lys Asp Pro Leu Gly Gln
155 160 165

Thr Glu Lys Ile Tyr Val Leu Asp Gly Thr Gln Asn Asp Thr Ala 170 175 180

Phe Val Phe Pro Arg Leu Arg Asp Phe Thr Leu Ala Met Ala Ala 185 190 195

Arg Lys Ala Ser Arg Val Arg Val Pro Phe Pro Trp Val Gly Thr

Gly Gln Leu Val Tyr Gly Gly Phe Leu Tyr Phe Ala Arg Arg Pro 215 220 225

Pro Gly Arg Pro Gly Gly Gly Gly Glu Met Glu Asn Thr Leu Gln 230 235 240

Leu Ile Lys Phe His Leu Ala Asn Arg Thr Val Val Asp Ser Ser 245 250 255

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Val Phe Pro Ala Glu Gly Leu Ile Pro Pro Tyr Gly Leu Thr Ala
Asp Thr Tyr Ile Asp Leu Val Ala Asp Glu Glu Gly Leu Trp Ala
Val Tyr Ala Thr Arg Glu Asp Asp Arg His Leu Cys Leu Ala Lys
Leu Asp Pro Gln Thr Leu Asp Thr Glu Gln Gln Trp Asp Thr Pro
                305
Cys Pro Arg Glu Asn Ala Glu Ala Ala Phe Val Ile Cys Gly Thr
                                                         330
                320
Leu Tyr Val Val Tyr Asn Thr Arg Pro Ala Ser Arg Ala Arg Ile
                                                         345
                335
Gln Cys Ser Phe Asp Ala Ser Gly Thr Leu Thr Pro Glu Arg Ala
                                                         360
                350
                                    355
Ala Leu Pro Tyr Phe Pro Arg Tyr Gly Ala His Ala Ser Leu
                                                         375
Arg Tyr Asn Pro Arg Glu Arg Gln Leu Tyr Ala Trp Asp Asp Gly
                                                         390
Tyr Gln Ile Val Tyr Lys Leu Glu Met Arg Lys Lys Glu Glu Glu
                395
                                    400
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Val

<210> 147 <211> 2052 <212> DNA

<213> Homo sapiens

<400> 147
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gtteteetet tetetetaat ecateegtea eeteteetgt cateegttee 150
catgeegtga ggteeattea eagaacacat ecatggetet eatgeteagt 200
ttggttetga gteteeteaa getgggatea gggeagtgge aggtgtttgg 250
geeagacaag eetgteeagg eettggtggg ggaggaegea geatteteet 300
ġttteetgte teetaagace aatgeagagg ecatggaagt geggttette 350
aggggeeagt tetetagegt ggteeacete tacagggaeg ggaaggaeca 400
geeatttatg eagatgeeae agtateaagg eaggaeaaaa etggtgaagg 450
attetattge ggaggggege atetetetga ggetggaaaa eattaetgtg 500

ttggatgctg gcctctatgg gtgcaggatt agttcccagt cttactacca 550 gaaggccatc tgggagctac aggtgtcagc actgggctca gttcctctca 600 tttccatcac gggatatgtt gatagagaca tccagctact ctgtcagtcc 650 tcgggctggt tcccccggcc cacagcgaag tggaaaggtc cacaaggaca 700 ggatttgtcc acagactcca ggacaaacag agacatgcat ggcctgtttg 750 atgtggagat ctctctgacc gtccaagaga acgccgggag catatcctgt 800 tccatgcggc atgctcatct gagccgagag gtggaatcca gggtacagat 850 aggagatacc tttttcgagc ctatatcgtg gcacctggct accaaagtac 900 tgggaatact ctgctgtggc ctattttttg gcattgttgg actgaagatt 950 ttcttctcca aattccagtg gaaaatccag gcggaactgg actggagaag 1000 aaagcacgga caggcagaat tgagagacgc ccggaaacac gcagtggagg 1050 tgactctgga tccagagacg gctcacccga agctctgcgt ttctgatctg 1100 aaaactgtaa cccatagaaa agctccccag gaggtgcctc actctgagaa 1150 gagatttaca aggaagagtg tggtggcttc tcagagtttc caagcaggga 1200 aacattactg ggaggtggac ggaggacaca ataaaaggtg gcgcgtggga 1250 gtgtgccggg atgatgtgga caggaggaag gagtacgtga ctttgtctcc 1300 cgatcatggg tactgggtcc tcagactgaa tggagaacat ttgtatttca 1350 cattaaatcc ccgttttatc agcgtcttcc ccaggacccc acctacaaaa 1400 ataggggtct tcctggacta tgagtgtggg accatctcct tcttcaacat 1450 aaatgaccag toocttattt atacoctgac atgtoggttt gaaggottat 1500 tgaggcccta cattgagtat ccgtcctata atgagcaaaa tggaactccc 1550 atagtcatct gcccagtcac ccaggaatca gagaaagagg cctcttggca 1600 aagggcctct gcaatcccag agacaagcaa cagtgagtcc tcctcacagg 1650 caaccacgcc cttcctcccc aggggtgaaa tgtaggatga atcacatccc 1700 acattettet ttagggatat taaggtetet eteceagate caaagteeeg 1750 cagcagccgg ccaaggtggc ttccagatga agggggactg gcctgtccac 1800 atgggagtca ggtgtcatgg ctgccctgag ctgggaggga agaaggctga 1850 cattacattt agtttgctct cactccatct ggctaagtga tcttgaaata 1900 ccacctctca ggtgaagaac cgtcaggaat tcccatctca caggctgtgg 1950

tgtagattaa gtagacaagg aatgtgaata atgcttagat cttattgatg 2000 acagagtgta tcctaatggt ttgttcatta tattacactt tcagtaaaaa 2050 aa 2052

<210> 148

<211> 500

<212> PRT

<213> Homo sapiens

<400> 148

Met Ala Leu Met Leu Ser Leu Val Leu Ser Leu Leu Lys Leu Gly
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Ser Gly Gln Trp Gln Val Phe Gly Pro Asp Lys Pro Val Gln Ala 20 25 30

Leu Val Gly Glu Asp Ala Ala Phe Ser Cys Phe Leu Ser Pro Lys 35 40 45

Thr Asn Ala Glu Ala Met Glu Val Arg Phe Phe Arg Gly Gln Phe 50 55 60

Ser Ser Val Val His Leu Tyr Arg Asp Gly Lys Asp Gln Pro Phe 65 70 75

Met Gln Met Pro Gln Tyr Gln Gly Arg Thr Lys Leu Val Lys Asp . 80 85 90

Ser Ile Ala Glu Gly Arg Ile Ser Leu Arg Leu Glu Asn Ile Thr 95 100 105

Val Leu Asp Ala Gly Leu Tyr Gly Cys Arg Ile Ser Ser Gln Ser 110 115 120

Tyr Tyr Gln Lys Ala Ile Trp Glu Leu Gln Val Ser Ala Leu Gly
125 130 135

Ser Val Pro Leu Ile Ser Ile Thr Gly Tyr Val Asp Arg Asp Ile 140 145 150

Gln Leu Leu Cys Gln Ser Ser Gly Trp Phe Pro Arg Pro Thr Ala 155 160 165

Lys Trp Lys Gly Pro Gln Gly Gln Asp Leu Ser Thr Asp Ser Arg
170 175 180

Thr Asn Arg Asp Met His Gly Leu Phe Asp Val Glu Ile Ser Leu 185 190 195

Thr Val Gln Glu Asn Ala Gly Ser Ile Ser Cys Ser Met Arg His 200 205 210

Ala His Leu Ser Arg Glu Val Glu Ser Arg Val Gln Ile Gly Asp 215 220 225

Thr Phe Phe Glu Pro Ile Ser Trp His Leu Ala Thr Lys Val Leu

	230		235	240
Gly Ile Leu	Cys Cys Gly 245	Leu Phe Phe	e Gly Ile Val 250	Gly Leu Lys 255
Ile Phe Phe	Ser Lys Phe 260	Gln Trp Ly	s Ile Gln Ala 265	Glu Leu Asp 270
Trp Arg Arg	Lys His Gly 275	Gln Ala Gl	Leu Arg Asp 280	Ala Arg Lys 285
His Ala Val	Glu Val Thr 290	Leu Asp Pro	Glu Thr Ala 295	His Pro Lys 300
Leu Cys Val	Ser Asp Leu 305	Lys Thr Va	l Thr His Arg 310	Lys Ala Pro 315
Gln Glu Val	Pro His Ser 320	Glu Lys Ar	g Phe Thr Arg 325	Lys Ser Val 330
Val Ala Ser	Gln Ser Phe 335	Gln Ala Gl	y Lys His Tyr 340	Trp Glu Val 345
Asp Gly Gly	His Asn Lys 350	Arg Trp Are	g Val Gly Val 355	Cys Arg Asp 360
Asp Val Asp	Arg Arg Lys 365	Glu Tyr Va	1 Thr Leu Ser 370	Pro Asp His 375
Gly Tyr Trp	Val Leu Arg 380	Leu Asn Gl	y Glu His Leu 385	Tyr Phe Thr 390
Leu Asn Pro	Arg Phe Ile 395	Ser Val Ph	e Pro Arg Thr 400	Pro Pro Thr 405
Lys Ile Gly	Val Phe Leu 410	Asp Tyr Gl	u Cys Gly Thr 415	Ile Ser Phe 420
Phe Asn Ile	Asn Asp Gln 425	Ser Leu Il	e Tyr Thr Leu 430	Thr Cys Arg 435
Phe Glu Gly	Leu Leu Arg 440	Pro Tyr Il	e Glu Tyr Pro 445	Ser Tyr Asn 450
Glu Gln Asn	Gly Thr Pro 455	Ile Val Il	e Cys Pro Val 460	Thr Gln Glu 465
Ser Glu Lys	Glu Ala Ser 470	Trp Gln Ar	g Ala Ser Ala 475	Ile Pro Glu 480
Thr Ser Asn	Ser Glu Ser 485	Ser Ser Gl	n Ala Thr Thr 490	Pro Phe Leu 495
Pro Arg Gly	Glu Met 500			

<210> 149 <211> 24

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<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 149
gcgtggtcca cctctacagg gacg 24
<210> 150
<211> 23
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-23
<223> Synthetic construct.
<400> 150
ggaactgacc cagtgctgac acc 23
<210> 151
<211> 45
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-45
<223> Synthetic construct.
<400> 151
gcagatgcca cagtatcaag gcaggacaaa actggtgaag gattc 45
<210> 152
<211> 2294
<212> DNA
<213> Homo sapiens
<400> 152
 gcgatggtgc gcccggtggc ggtggcggcg gcggttgcgg aggcttcctt 50
 ggtcggattg caacgaggag aagatgactg accaaccgac tggctgaatg 100
 aatgaatggc ggagccgagc gcgccatgag gagcctgccg agcctgggcg 150
 gcctcgccct gttgtgctgc gccgccgccg ccgccgccgt cgcctcagcc 200
 gcctcggcgg ggaatgtcac cggtggcggc ggggccgcgg ggcaggtgga 250
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 gggcgacggc tcccacggcc caggccccga ggaccgggcc cccgcgcgcc 350
 accgtccacc gacccctggc tgcgacttct ccagcccagt ccccggagac 400
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<210> 153

<211> 258

<212> PRT

<213> Homo sapiens

<400> 153

Met Arg Ser Leu Pro Ser Leu Gly Gly Leu Ala Leu Leu Cys Cys 1 5 10 15

Ala Ala Ala Ala Ala Val Ala Ser Ala Ala Ser Ala Gly Asn 20 25 30

Val Thr Gly Gly Gly Ala Ala Gly Gln Val Asp Ala Ser Pro 35 40 45

Gly Pro Gly Leu Arg Gly Glu Pro Ser His Pro Phe Pro Arg Ala
50 55 60

Thr Ala Pro Thr Ala Gln Ala Pro Arg Thr Gly Pro Pro Arg Ala 65 70 75

Thr Val His Arg Pro Leu Ala Ala Thr Ser Pro Ala Gln Ser Pro 80 85 90

Glu Thr Thr Pro Leu Trp Ala Thr Ala Gly Pro Ser Ser Thr Thr 95 100 105

Phe Gln Ala Pro Leu Gly Pro Ser Pro Thr Thr Pro Pro Ala Ala 110 115 120

Glu Arg Thr Ser Thr Thr Ser Gln Ala Pro Thr Arg Pro Ala Pro 125 130 135

Thr Thr Leu Ser Thr Thr Thr Gly Pro Ala Pro Thr Thr Pro Val 140 145 150

Ala Thr Thr Val Pro Ala Pro Thr Thr Pro Arg Thr Pro Thr Pro 155 160 165

Asp Leu Pro Ser Ser Ser Asn Ser Ser Val Leu Pro Thr Pro Pro

170 175 180 Ala Thr Glu Ala Pro Ser Ser Pro Pro Pro Glu Tyr Val Cys Asn 185 190 Cys Ser Val Val Gly Ser Leu Asn Val Asn Arg Cys Asn Gln Thr Thr Gly Gln Cys Glu Cys Arg Pro Gly Tyr Gln Gly Leu His Cys Glu Thr Cys Lys Glu Gly Phe Tyr Leu Asn Tyr Thr Ser Gly Leu Cys Gln Pro Cys Asp Cys Ser Pro His Gly Ala Leu Ser Ile Pro Cys Asn Arg <210> 154 <211> 24 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-24 <223> Synthetic construct. <400> 154 aactgctctg tggttggaag cctg 24 <210> 155 <211> 24 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-24 <223> Synthetic construct. <400> 155 cagtcacatg gctgacagac ccac 24 <210> 156 <211> 38 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-38 <223> Synthetic construct.

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<400> 156

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<211> 689
<212> DNA
<213> Homo sapiens
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 ctggaccctg agcagcttct tgggccctgg tacgtgcttg cggtggcctc 150
 ccgggaaaag ggctttgcca tggagaagga catgaagaac gtcgtggggg 200
 tggtggtgac cctcactcca gaaaacaacc tgcggacgct gtcctctcag 250
 cacgggctgg gagggtgtga ccagagtgtc atggacctga taaagcgaaa 300
 ctccggatgg gtgtttgaga atccctcaat aggcgtgctg gagctctggg 350
 tgctggccac caacttcaga gactatgcca tcatcttcac tcagctggag 400
 ttcggggacg agcccttcaa caccgtggag ctgtacagtc tgacggagac 450
 agccagccag gaggccatgg ggctcttcac caagtggagc aggagcctgg 500
 gcttcctgtc acagtagcag gcccagctgc agaaggacct cacctgtgct 550
 cacaagatcc ttctgtgagt gctgcgtccc cagtagggat ggcgcccaca 600
 gggtcctgtg acctcggcca gtgtccaccc acctcgctca gcggctcccg 650
 gggcccagca ccagctcaga ataaagcgat tccacagca 689
<210> 158
<211> 163
<212> PRT
<213> Homo sapiens
<400> 158
Met Gly Gly Leu Leu Ala Ala Phe Leu Ala Leu Val Ser Val
Pro Arg Ala Gln Ala Val Trp Leu Gly Arg Leu Asp Pro Glu Gln
Leu Leu Gly Pro Trp Tyr Val Leu Ala Val Ala Ser Arg Glu Lys
Gly Phe Ala Met Glu Lys Asp Met Lys Asn Val Val Gly Val Val
Val Thr Leu Thr Pro Glu Asn Asn Leu Arg Thr Leu Ser Ser Gln
His Gly Leu Gly Gly Cys Asp Gln Ser Val Met Asp Leu Ile Lys
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85

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Arg Asn Ser Gly Trp Val Phe Glu Asn Pro Ser Ile Gly Val Leu 105
Glu Leu Trp Val Leu Ala Thr Asn Phe Glu Pro 115

Phe Thr Gln Leu Glu Phe Gly Asp Glu Pro 130

Phe Thr Ser Leu Trp Glu Glu Thr Ala Ser Gln Glu Ala Met Gly Leu 150

Phe Thr Lys Trp Ser Arg Ser Leu Gly Phe Leu Ser Gln
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<210> 159

<211> 1665

<212> DNA

<213> Homo sapiens

<400> 159

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ggtgctggag ctgccttggg tgcacctgag ggatgcagct gaattcacct 1000 gcagagctca gaaccctctc ggctctcagc aggtctacct gaacgtctcc 1050 ctgcagagca aagccacatc aggagtgact cagggggtgg tcgggggagc 1100 tggaggccaca gccctggtct tcctgtcctt ctgcgtcatc ttcgttgtag 1150 tgaggtcctg caggaagaaa tcggcaaggc cagcaggggg cgtgggagat 1200 acgggcatag aggatgcaaa cgctgtcagg ggttcagcct ctcaggggcc 1250 cctgactgaa ccttgggcag aagacagtcc cccagaccag cctccccag 1300 cttctgcccg ctcctcagtg ggggaaggag agctccagta tgcatcctc 1350 agcttccaga tggtgaagcc ttgggactcg cggggacagg aggccactga 1400 caccgagtac tcggagatca agatccacag atgagaaact gcagagactc 1450 accctgattg agggatcaca gcccctccag gcaagggaga agtcagaggc 1500 tgattcttgt agaattaaca gccctcaacg tgatgagcta tgataacact 1550 atgaattatg tgcagagtga aaagcacaca ggctttagag tcaaagtatc 1600 tcaaacctga atccacag tgcccctcc tttattttt taactaaaag 1650 acaggacaat tccta 1665

<210> 160

<211> 463

<212> PRT

<213> Homo sapiens

<400> 160

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1 5 10 15

Glu Gly Gln Thr Ser Lys Leu Leu Thr Met Gln Ser Ser Val Thr
20 25 30

Val Gln Glu Gly Leu Cys Val His Val Pro Cys Ser Phe Ser Tyr 35 40 45

Pro Ser His Gly Trp Ile Tyr Pro Gly Pro Val Val His Gly Tyr 50 55 60

Trp Phe Arg Glu Gly Ala Asn Thr Asp Gln Asp Ala Pro Val Ala 65 70 75

Thr Asn Asn Pro Ala Arg Ala Val Trp Glu Glu Thr Arg Asp Arg
80 85 90

Phe His Leu Leu Gly Asp Pro His Thr Lys Asn Cys Thr Leu Ser 95 100 105

Ile Arg Asp Ala Arg Arg Ser Asp Ala Gly Arg Tyr Phe Phe Arg

				110					115	•				120
Met	Glu	Lys	Gly	Ser 125	Ile	. Lys	Trp	Asn	Tyr 130		His	His	Arg	Leu 135
Ser	Val	Asn	Val	Thr 140		Leu	Thr	His	Arg 145		Asn	Ile	Leu	Ile 150
Pro	Gly	Thr	Leu	Glu 155	Ser	Gly	Cys	Pro	Gln 160		Leu	Thr	Суѕ	Ser 165
Val	Pro	Trp	Ala	Cys 170		Gln	Gly	Thr	Pro 175		Met	Ile	Ser	Trp 180
Ile	Gly	Thr	Ser	Val 185		Pro	Leu	Asp	Pro 190		Thr	Thr	Arg	Ser 195
Ser	Val	Leu	Thr	Leu 200		Pro	Gln	Pro	Gln 205		His	Gly	Thr	Ser 210
Leu	Thr	Cys	Gln	Val 215	Thr	Phe	Pro	Gly	Ala 220	Ser	Val	Thr	Thr	Asn 225
Lys	Thr	Val	His	Leu 230	Asn	Val	Ser	Tyr	Pro 235	Pro	Gln	Asn	Leu	Thr 240
Met	Thr	Val	Phe	Gln 245	Gly	Asp	Gly	Thr	Val 250	Ser	Thr	Val	Leu	Gly 255
Asn	Gly	Ser	Ser	Leu 260	Ser	Leu	Pro	Glu	Gly 265	Gln	Ser	Leu	Arg	Leu 270
Val	Cys	Ala	Val	Asp 275	Ala	Val	Asp	Ser	Asn 280	Pro	Pro	Ala	Arg	Leu 285
Ser	Leu	Ser	Trp	Arg 290	Gly	Leu	Thr	Leu	Cys 295	Pro	Ser	Gln	Pro	Ser 300
Asn	Pro	Gly	Val	Leu 305	Glu	Leu	Pro	Trp	Val 310	His	Leu	Arg	Asp	Ala 315
Ala	Glu	Phe	Thr	Cys 320	Arg	Ala	Gln	Asn	Pro 325	Leu	Gly	Ser	Gln	Gln 330
Val	Tyr	Leu	Asn	Val 335	Ser	Leu	Gln	Ser	Lys 340	Ala	Thr	Ser	Gly	Val 345
Thr	Gln	Gly	Val	Val 350	Gly	Gly	Ala	Gly	Ala 355	Thr	Ala	Leu	Val	Phe 360
Leu	Ser	Phe	Cys	Val 365	Ile	Phe	Val	Val	Val 370	Arg	Ser	Cys	Arg	Lys 375
Lys	Ser	Ala	Arg	Pro 380	Ala	Ala	Gly	Val	Gly 385	Asp	Thr	Gly	Ile	Glu 390
Asp	Ala	Asn	Ala	Val 395	Arg	Gly	Ser	Ala	Ser 400	Gln	Gly	Pro	Leu	Thr 405

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Glu Pro Trp Ala Glu Asp Ser Pro Pro Asp Gln Pro Pro Pro Ala
                                     415
 Ser Ala Arg Ser Ser Val Gly Glu Gly Glu Leu Gln Tyr Ala Ser
 Leu Ser Phe Gln Met Val Lys Pro Trp Asp Ser Arg Gly Gln Glu
 Ala Thr Asp Thr Glu Tyr Ser Glu Ile Lys Ile His Arg
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<211> 739
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<213> Homo sapiens
<400> 161
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accetgttee tgggtgteac geteggeetg geegetgeec tgteetteac 100
cctggaggag gaggatatca cagggacctg gtacgtgaag gccatggtgg 150
tcgataagga ctttccggag gacaggaggc ccaggaaggt gtccccagtg 200
aaggtgacag ccctgggcgg tgggaagttg gaagccacgt tcaccttcat 250
gagggaggat cggtgcatcc agaagaaaat cctgatgcgg aagacggagg 300
agectggeaa atacagegee tatgggggea ggaageteat gtacetgeag 350
gagetgeeca ggagggaeca etacatettt taetgeaaag accageacea 400
tgggggcctg ctccacatgg gaaagcttgt gggtaggaat tctgatacca 450
accgggaggc cctggaagaa tttaagaaat tggtgcagcg caagggactc 500
tcggaggagg acattttcac gcccctgcag acgggaagct gcgttcccga 550
acactaggca gcccccgggt ctgcacctcc agagcccacc ctaccaccag 600
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aaaaaaaaa aaaaaaaaa aaaaaaaaa 739

<210> 162

<211> 170

<212> PRT

<213> Homo sapiens

<400> 162

Met Lys Thr Leu Phe Leu Gly Val Thr Leu Gly Leu Ala Ala Ala 1 5 10 15

acacagagee eggaceacet ggacetacee tecagecatg accetteeet 650

Leu Ser Phe Thr Leu Glu Glu Glu Asp Ile Thr Gly Thr Trp Tyr

Val Lys Ala Met Val Val Asp Lys Asp Phe Pro Glu Asp Arg Arg

Pro Arg Lys Val Ser Pro Val Lys Val Thr Ala Leu Gly Gly 50 55 60

Lys Leu Glu Ala Thr Phe Thr Phe Met Arg Glu Asp Arg Cys Ile

Gln Lys Lys Ile Leu Met Arg Lys Thr Glu Glu Pro Gly Lys Tyr 80 85 90

Ser Ala Tyr Gly Gly Arg Lys Leu Met Tyr Leu Gln Glu Leu Pro $95 \hspace{1.5cm} 100 \hspace{1.5cm} 105$

Arg Arg Asp His Tyr Ile Phe Tyr Cys Lys Asp Gln His His Gly 110 115 120

Gly Leu Leu His Met Gly Lys Leu Val Gly Arg Asn Ser Asp Thr 125 130 135

Asn Arg Glu Ala Leu Glu Glu Phe Lys Lys Leu Val Gln Arg Lys 140 145 150

Gly Leu Ser Glu Glu Asp Ile Phe Thr Pro Leu Gln Thr Gly Ser 155 160 165

Cys Val Pro Glu His 170

<210> 163

<211> 22

<212> DNA

<213> Artificial

<220>

<221> Artificial Sequence

<222> 1-22

<223> Synthetic construct.

<400> 163

ggagatgaag accetgttee tg 22

<210> 164

<211> 26

<212> DNA

<213> Artificial

<220>

<221> Artificial Sequence

<222> 1-26

<223> Synthetic construct.

<400> 164

ggagatgaag accetgttce tgggtg 26

<400> 169

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<210> 165
<211> 21
<212> DNA
<213> Artificial
<220>
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<222> 1-21
<223> Synthetic construct.
<400> 165
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<210> 166
<211> 25
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-25
<223> Synthetic construct.
<400> 166
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<210> 167
<211> 50
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-50
<223> Synthetic construct.
<400> 167
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<210> 168
<211> 45
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-45
<223> Synthetic construct.
<400> 168
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<210> 169
<211> 1204
<212> DNA
<213> Homo sapiens
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 cagaggtete acageageea aggaacetgg ggeeegetee teceeetee 100
 aggccatgag gattctgcag ttaatcctgc ttgctctggc aacagggctt 150
 gtagggggag agaccaggat catcaagggg ttcgagtgca agcctcactc 200
 ccagccctgg caggcagccc tgttcgagaa gacgcggcta ctctgtgggg 250
 cgacgeteat egececaga tggeteetga cageageeca etgeeteaag 300
 ccccgctaca tagttcacct ggggcagcac aacctccaga aggaggaggg 350
 ctgtgagcag acccggacag ccactgagtc cttcccccac cccggcttca 400
 acaacagcct ccccaacaaa gaccaccgca atgacatcat gctggtgaag 450
 atggcatcgc cagtetecat cacetggget gtgcgacccc teacectete 500
 ctcacgctgt gtcactgctg gcaccagctg cctcatttcc ggctggggca 550
 gcacgtccag cccccagtta cgcctgcctc acaccttgcg atgcgccaac 600
 atcaccatca ttgagcacca gaagtgtgag aacgcctacc ccggcaacat 650
 cacagacacc atggtgtgt ccagcgtgca ggaagggggc aaggactcct 700
 gccagggtga ctccgggggc cctctggtct gtaaccagtc tcttcaaggc 750
 attatctcct ggggccagga tccgtgtgcg atcacccgaa agcctggtgt 800
 ctacacgaaa gtctgcaaat atgtggactg gatccaggag acgatgaaga 850
 acaattagac tggacccacc caccacagcc catcaccctc catttccact 900
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 cctctacgaa cattctttgg gcctcctgga ctacaggaga tgctgtcact 1000
 taataatcaa cctggggttc gaaatcagtg agacctggat tcaaattctg 1050
 ccttgaaata ttgtgactct gggaatgaca acacctggtt tgttctctgt 1100
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 aaatatttgc taaatgaaaa aaaaaaaaaa aaaaaaaaa 1200
aaaa 1204
<210> 170
<211> 250
<212> PRT
<213> Homo sapiens
<400> 170
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  1
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Val Gly Gly Glu Thr Arg Ile Ile Lys Gly Phe Glu Cys Lys Pro
 His Ser Gln Pro Trp Gln Ala Ala Leu Phe Glu Lys Thr Arg Leu
 Leu Cys Gly Ala Thr Leu Ile Ala Pro Arg Trp Leu Leu Thr Ala
 Ala His Cys Leu Lys Pro Arg Tyr Ile Val His Leu Gly Gln His
 Asn Leu Gln Lys Glu Glu Gly Cys Glu Gln Thr Arg Thr Ala Thr
 Glu Ser Phe Pro His Pro Gly Phe Asn Asn Ser Leu Pro Asn Lys
                                      100
 Asp His Arg Asn Asp Ile Met Leu Val Lys Met Ala Ser Pro Val
                                      115
 Ser Ile Thr Trp Ala Val Arg Pro Leu Thr Leu Ser Ser Arg Cys
                                      130
 Val Thr Ala Gly Thr Ser Cys Leu Ile Ser Gly Trp Gly Ser Thr
                 140
 Ser Ser Pro Gln Leu Arg Leu Pro His Thr Leu Arg Cys Ala Asn
                 155
 Ile Thr Ile Ile Glu His Gln Lys Cys Glu Asn Ala Tyr Pro Gly
                 170
 Asn Ile Thr Asp Thr Met Val Cys Ala Ser Val Gln Glu Gly Gly
                 185
 Lys Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Asn
                 200
 Gln Ser Leu Gln Gly Ile Ile Ser Trp Gly Gln Asp Pro Cys Ala
 Ile Thr Arg Lys Pro Gly Val Tyr Thr Lys Val Cys Lys Tyr Val
                 230
 Asp Trp Ile Gln Glu Thr Met Lys Asn Asn
                 245
<210> 171
<211> 25
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
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<222> 1-25

<223> Synthetic construct.

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<400> 171
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<210> 172
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 172
 ctccaggcca tgaggattct gcag 24
<210> 173
<211> 18
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-18
<223> Synthetic construct.
<400> 173
cctctggtct gtaaccag 18
<210> 174
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 174
 tctgtgatgt tgccggggta ggcg 24
<210> 175
<211> 25
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-25
<223> Synthetic construct.
<400> 175
cgtgtagaca ccaggctttc gggtg 25
<210> 176
<211> 18
<212> DNA
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<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-18
<223> Synthetic construct.
<400> 176
 cccttgatga tcctggtc 18
<210> 177
<211> 50
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-50
<223> Synthetic construct.
<400> 177
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<210> 178
<211> 43
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-43
<223> Synthetic construct.
<400> 178
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<210> 179
<211> 907
<212> DNA
<213> Homo sapiens
<400> 179
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aagaaagagg agagcaccga agaagtgaaa atagaagttt tgcatcgtcc 150
agaaaactgc tctaagacaa gcaagaaggg agacctacta aatgcccatt 200
atgacggcta cctggctaaa gacggctcga aattctactg cagccggaca 250
caaaatgaag gccaccccaa atggtttgtt cttggtgttg ggcaagtcat 300
aaaaggccta gacattgcta tgacagatat gtgccctgga gaaaagcgaa 350
aagtagttat acccccttca tttgcatacg gaaaggaagg ctatgcagaa 400
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<210> 180

<211> 222

<212> PRT

<213> Homo sapiens

<400> 180

Met Pro Lys Thr Met His Phe Leu Phe Arg Phe Ile Val Phe Phe 1 5 10 15

Tyr Leu Trp Gly Leu Phe Thr Ala Gln Arg Gln Lys Lys Glu Glu 20 25 30

Ser Thr Glu Glu Val Lys Ile Glu Val Leu His Arg Pro Glu Asn 35 40 45

Cys Ser Lys Thr Ser Lys Lys Gly Asp Leu Leu Asn Ala His Tyr 50 55 60

Asp Gly Tyr Leu Ala Lys Asp Gly Ser Lys Phe Tyr Cys Ser Arg 65 70 75

Thr Gln Asn Glu Gly His Pro Lys Trp Phe Val Leu Gly Val Gly 80 85 90

Gln Val Ile Lys Gly Leu Asp Ile Ala Met Thr Asp Met Cys Pro 95 100 105

Gly Glu Lys Arg Lys Val Val Ile Pro Pro Ser Phe Ala Tyr Gly
110 115 120

Lys Glu Gly Tyr Ala Glu Gly Lys Ile Pro Pro Asp Ala Thr Leu 125 130 135

Ile Phe Glu Ile Glu Leu Tyr Ala Val Thr Lys Gly Pro Arg Ser 140 145 150

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Ile Glu Thr Phe Lys Gln Ile Asp Met Asp Asn Asp Arg Gln Leu
 Ser Lys Ala Glu Ile Asn Leu Tyr Leu Gln Arg Glu Phe Glu Lys
                 170
 Asp Glu Lys Pro Arg Asp Lys Ser Tyr Gln Asp Ala Val Leu Glu
 Asp Ile Phe Lys Lys Asn Asp His Asp Gly Asp Gly Phe Ile Ser
                                      205
 Pro Lys Glu Tyr Asn Val Tyr Gln His Asp Glu Leu
                 215
<210> 181
<211> 22
<212> DNA
<213> Artificial
<220>
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<222> 1-22
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<400> 181
gtgttctgct ggagccgatg cc 22
<210> 182
<211> 18
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-18
<223> Synthetic construct.
<400> 182
gacatggaca atgacagg 18
<210> 183
<211> 18
<212> DNA
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<220>
<221> Artificial Sequence
<222> 1-18
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<400> 183
cctttcagga tgtaggag 18
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<211> 18
<212> DNA
<213> Artificial
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<220>
<221> Artificial Sequence
<222> 1-18
<223> Synthetic construct.
<400> 184
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<210> 185
<211> 27
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<220>
<221> Artificial Sequence
<222> 1-27
<223> Synthetic construct.
<400> 185
gcatcctgat atgacttgtc acgtggc 27
<210> 186
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 186
tacaagaggg aagaggagtt gcac 24
<210> 187
<211> 52
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-52
<223> Synthetic construct.
<400> 187
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cc 52
<210> 188
<211> 573
<212> DNA
<213> Homo sapiens
<400> 188
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ctctttggag ctgtgactca gaaaaccaaa acttcctgtg ctaagtgccc 100
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cccaaatgct tcctgtgtca ataacactca ctgcacctgc aaccatggat 150 atacttctgg atctgggcag aaactattca cattccctt ggagacatgt 200 aacgccaggc atggtggctc gcgcctgtaa tcccagttct ttgggaagcc 250 aaggcaggtg gatcacctga ggtcaggagt ttgagaccag cctggccaac 300 atagtgaaac cccgtgtcta ctaaaaatac aaaaatcagc cgggcgtggt 350 ggtgcatgcc tgcaatccca gttactcggg aggctgaggc aggagaatcg 400 cttgaactca ggaggcagaa gttgcagtga acccagatcc tgccattgca 450 ctccagcatg gatgacagag caagactccg tctcaaaaag aaaagatagt 500 ttcttgttc atttcgcgac tgccctcca gtgttcctg ggatcccctc 550 ccaaataaag tacttatatt ctc 573

<210> 189

<211> 74

<212> PRT

<213> Homo sapiens

<400> 189

Met Gln Gly Pro Leu Leu Leu Pro Gly Leu Cys Phe Leu Leu Ser 1 5 10 15

Leu Phe Gly Ala Val Thr Gln Lys Thr Lys Thr Ser Cys Ala Lys 20 25 30

Cys Pro Pro Asn Ala Ser Cys Val Asn Asn Thr His Cys Thr Cys 35 40 45

Asn His Gly Tyr Thr Ser Gly Ser Gly Gln Lys Leu Phe Thr Phe 50 55 60

Pro Leu Glu Thr Cys Asn Ala Arg His Gly Gly Ser Arg Leu 65 70

<210> 190

<211> 24

<212> DNA

<213> Artificial

<220>

<221> Artificial Sequence

<222> 1-24

<223> Synthetic construct.

<400> 190

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<210> 191

<211> 24

<212> DNA

<213> Artificial

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<220>
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<222> 1-24
<223> Synthetic construct.
<400> 191
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<210> 192
<211> 50
<212> DNA
<213> Artificial
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<221> Artificial Sequence
<222> 1-50
<223> Synthetic construct.
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As Ser Gln Pro Trp Gln Val Gly Leu Phe Glu Gly Thr Ser Leu 35 40 45

Arg Cys Gly Gly Val Leu Ile Asp His Arg Trp Val Leu Thr Ala 50 55 60

Ala His Cys Ser Gly Ser Arg Tyr Trp Val Arg Leu Gly Glu His $65 \hspace{1cm} 70 \hspace{1cm} 75$

Ser Leu Ser Gln Leu Asp Trp Thr Glu Gln Ile Arg His Ser Gly 80 85 90

Phe Ser Val Thr His Pro Gly Tyr Leu Gly Ala Ser Thr Ser His 95 100 105

Glu His Asp Leu Arg Leu Leu Arg Leu Arg Leu Pro Val Arg Val 110 115 120

Thr Ser Ser Val Gln Pro Leu Pro Leu Pro Asn Asp Cys Ala Thr 125 130 135

Ala Gly Thr Glu Cys His Val Ser Gly Trp Gly Ile Thr Asn His 140 145 150

Pro Arg Asn Pro Phe Pro Asp Leu Leu Gln Cys Leu Asn Leu Ser 155 160 165

Ile Val Ser His Ala Thr Cys His Gly Val Tyr Pro Gly Arg Ile 170 175 180

Thr Ser Asn Met Val Cys Ala Gly Gly Val Pro Gly Gln Asp Ala 185 190 195

Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Gly Gly Val Leu

Gln Gly Leu Val Ser Trp Gly Ser Val Gly Pro Cys Gly Gln Asp 225

Gly Ile Pro Gly Val Tyr Thr Tyr Ile Cys Lys Tyr Val Asp Trp 230

Ile Arg Met Ile Met Arg Asn Asn 245

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Arg Glu Phe Leu Cys Asp Gln Lys Tyr Ser Asp Glu Glu Asn Leu 35 40 45

Pro Glu Lys Leu Thr Ala Phe Lys Glu Lys Tyr Met Glu Phe Asp 50 55 60

Leu Asn Asn Glu Gly Glu Ile Asp Leu Met Ser Leu Lys Arg Met

Met Glu Lys Leu Gly Val Pro Lys Thr His Leu Glu Met Lys Lys 80 85 90

Met Ile Ser Glu Val Thr Gly Gly Val Ser Asp Thr Ile Ser Tyr 95 100 105

Arg Asp Phe Val Asn Met Met Leu Gly Lys Arg Ser Ala Val Leu 110 115 120

Lys Leu Val Met Met Phe Glu Gly Lys Ala Asn Glu Ser Ser Pro 125 130 135

Lys Pro Val Gly Pro Pro Pro Glu Arg Asp Ile Ala Ser Leu Pro 140 145 150

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<212> PRT

<213> Homo sapiens

<210> 197

<211> 4842

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<213> Homo sapiens

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<212> PRT

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Ala Val Ala Cys Pro Thr Lys Cys Thr Cys Ser Ala Ala Ser Val 35 40 45

Asp Cys His Gly Leu Gly Leu Arg Ala Val Pro Arg Gly Ile Pro 50 55 60

Arg Asn Ala Glu Arg Leu Asp Leu Asp Arg Asn Asn Ile Thr Arg
65 70 75

Ile Thr Lys Met Asp Phe Ala Gly Leu Lys Asn Leu Arg Val Leu 80 85 90

His Leu Glu Asp Asn Gln Val Ser Val Ile Glu Arg Gly Ala Phe 95 100 105

Gln Asp Leu Lys Gln Leu Glu Arg Leu Arg Leu Asn Lys Asn Lys 110 115 120

Leu Gln Val Leu Pro Glu Leu Leu Phe Gln Ser Thr Pro Lys Leu 125 130 135

Thr Arg Leu Asp Leu Ser Glu Asn Gln Ile Gln Gly Ile Pro Arg 140 145 150

Lys Ala Phe Arg Gly Ile Thr Asp Val Lys Asn Leu Gln Leu Asp 155 160 165

Asn Asn His Ile Ser Cys Ile Glu Asp Gly Ala Phe Arg Ala Leu 170 Arg Asp Leu Glu Ile Leu Thr Leu Asn Asn Asn Ile Ser Arg Ile Leu Val Thr Ser Phe Asn His Met Pro Lys Ile Arq Thr Leu Arg Leu His Ser Asn His Leu Tyr Cys Asp Cys His Leu Ala Trp Leu Ser Asp Trp Leu Arg Gln Arg Arg Thr Val Gly Gln Phe Thr 240 Leu Cys Met Ala Pro Val His Leu Arg Gly Phe Asn Val Ala Asp 245 Val Gln Lys Lys Glu Tyr Val Cys Pro Ala Pro His Ser Glu Pro 260 270 Pro Ser Cys Asn Ala Asn Ser Ile Ser Cys Pro Ser Pro Cys Thr 275 Cys Ser Asn Asn Ile Val Asp Cys Arg Gly Lys Gly Leu Met Glu 290 Ile Pro Ala Asn Leu Pro Glu Gly Ile Val Glu Ile Arg Leu Glu 305 Gln Asn Ser Ile Lys Ala Ile Pro Ala Gly Ala Phe Thr Gln Tyr 320 330 Lys Lys Leu Lys Arg Ile Asp Ile Ser Lys Asn Gln Ile Ser Asp Ile Ala Pro Asp Ala Phe Gln Gly Leu Lys Ser Leu Thr Ser Leu 350 360 Val Leu Tyr Gly Asn Lys Ile Thr Glu Ile Ala Lys Gly Leu Phe 365 Asp Gly Leu Val Ser Leu Gln Leu Leu Leu Leu Asn Ala Asn Lys 380 385 390 Ile Asn Cys Leu Arg Val Asn Thr Phe Gln Asp Leu Gln Asn Leu 395 Asn Leu Leu Ser Leu Tyr Asp Asn Lys Leu Gln Thr Ile Ser Lys 410 420 Gly Leu Phe Ala Pro Leu Gln Ser Ile Gln Thr Leu His Leu Ala Gln Asn Pro Phe Val Cys Asp Cys His Leu Lys Trp Leu Ala Asp 440 450 Tyr Leu Gln Asp Asn Pro Ile Glu Thr Ser Gly Ala Arg Cys Ser

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Lys	Lys	Phe	Arg	Cys 485	Ser	Gly	Ser	Glu	Asp 490	Tyr	Arg	Ser	Arg	Phe 495
Ser	Ser	Glu	Cys	Phe 500	Met	Asp	Leu	Val	Cys 505	Pro	Glu	Lys	Cys	Arg 510
Cys	Glu	Gly	Thr	Ile 515	Val	Asp	Cys	Ser	Asn 520	Gln	Lys	Leu	Val	Arg 525
Ile	Pro	Ser	His	Leu 530	Pro	Glu	Tyr	Val	Thr 535	Asp	Leu	Arg	Leu	Asn 540
Asp	Asn	Glu	Val	Ser 545	Val	Leu	Glu	Ala	Thr 550	Gly	Ile	Phe	Lys	Lys 555
Leu	Pro	Asn	Leu	Arg 560	Lys	Ile	Asn	Leu	Ser 565	Asn	Asn	Lys	Ile	Lys 570
Glu	Val	Arg	Glu	Gly 575	Ala	Phe	Asp	Gly	Ala 580	Ala	Ser	Val	Gln	Glu 585
Leu	Met	Leu	Thr	Gly 590	Asn	Gln	Leu	Glu	Thr 595	Val	His	Gly	Arg	Val 600
Phe	Arg	Gly	Leu	Ser 605	Gly	Leu	Lys	Thr	Leu 610	Met	Leu	Arg	Ser	Asn 615
Leu	Ile	Ser	Суз	Val 620	Ser	Asn	Asp	Thr	Phe 625	Ala	Gly	Leu	Ser	Ser 630
Val	Arg	Leu	Leu	Ser 635	Leu	Tyr	Asp	Asn	Arg 640	Ile	Thr	Thr	Ile	Thr 645
Pro	Gly	Ala	Phe	Thr 650	Thr	Leu	Val	Ser	Leu 655	Ser	Thr	Ile	Asn	Leu 660
Leu	Ser	Asn	Pro	Phe 665	Asn	Cys	Asn	Cys	His 670	Leu	Ala	Trp	Leu	Gly 675
Lys	Trp	Leu	Arg	Lys 680	Arg	Arg	Ile	Val	Ser 685	Gly	Asn	Pro	Arg	Cys 690
Gln	Lys	Pro	Phe	Phe 695	Leu	Lys	Glu	Ile	Pro 700	Ile	Gln	Asp	Val	Ala 705
Ile	Gln	Asp	Phe	Thr 710	Cys	Asp	Gly	Asn	Glu 715	Glu	Ser	Ser	Cys	Gln 720
Leu	Ser	Pro	Arg	Cys 725	Pro	Glu	Gln	Cys	Thr 730	Cys	Met	Glu	Thr	Val 735
Val	Arg	Cys	Ser	Asn 740	Lys	Gly	Leu	Arg	Ala 745	Leu	Pro	Arg	Gly	Met 750

Pro Lys Asp Val Thr Glu Leu Tyr Leu Glu Gly Asn His Leu Thr Ala Val Pro Arg Glu Leu Ser Ala Leu Arg His Leu Thr Leu Ile Asp Leu Ser Asn Asn Ser Ile Ser Met Leu Thr Asn Tyr Thr Phe Ser Asn Met Ser His Leu Ser Thr Leu Ile Leu Ser Tyr Asn Arg Leu Arg Cys Ile Pro Val His Ala Phe Asn Gly Leu Arg Ser Leu Arg Val Leu Thr Leu His Gly Asn Asp Ile Ser Ser Val Pro Glu 835 Gly Ser Phe Asn Asp Leu Thr Ser Leu Ser His Leu Ala Leu Gly Thr Asn Pro Leu His Cys Asp Cys Ser Leu Arg Trp Leu Ser Glu 860 Trp Val Lys Ala Gly Tyr Lys Glu Pro Gly Ile Ala Arg Cys Ser 875 Ser Pro Glu Pro Met Ala Asp Arg Leu Leu Leu Thr Thr Pro Thr 890 His Arg Phe Gln Cys Lys Gly Pro Val Asp Ile Asn Ile Val Ala 905 Lys Cys Asn Ala Cys Leu Ser Ser Pro Cys Lys Asn Asn Gly Thr Cys Thr Gln Asp Pro Val Glu Leu Tyr Arg Cys Ala Cys Pro Tyr 935 Ser Tyr Lys Gly Lys Asp Cys Thr Val Pro Ile Asn Thr Cys Ile Gln Asn Pro Cys Gln His Gly Gly Thr Cys His Leu Ser Asp Ser 965 His Lys Asp Gly Phe Ser Cys Ser Cys Pro Leu Gly Phe Glu Gly 980 Gln Arg Cys Glu Ile Asn Pro Asp Asp Cys Glu Asp Asn Asp Cys 995 Glu Asn Asn Ala Thr Cys Val Asp Gly Ile Asn Asn Tyr Val Cys 1010 Ile Cys Pro Pro Asn Tyr Thr Gly Glu Leu Cys Asp Glu Val Ile 1025 1035 Asp His Cys Val Pro Glu Leu Asn Leu Cys Gln His Glu Ala Lys

			1040				10	45				1050
Cys	Ile	Pro	Leu Asp 1055		Gly	Phe	Ser C		lu	Cys	Val	Pro Gly 1065
Tyr	Ser	Gly	Lys Leu 1070		Glu	Thr	Asp As 10		.sp	Asp	Cys	Val Ala 1080
His	Lys	Cys	Arg His 1085		Ala	Gln	Cys Va		.sp	Thr	Ile	Asn Gly 1095
Tyr	Thr	Cys	Thr Cys 1100		Gln	Gly	Phe Se		ly	Pro	Phe	Cys Glu 1110
His	Pro	Pro	Pro Met 1115	Val	Leu	Leu	Gln Th		er	Pro	Cys	Asp Gln 1125
Tyr	Glu	Cys	Gln Asn 1130	Gly	Ala	Gln	Cys II		al	Val	Gln	Gln Glu 1140
Pro	Thr	Cys	Arg Cys 1145	Pro	Pro	Gly	Phe Al		ly	Pro	Arg	Cys Glu 1155
Lys	Leu	Ile	Thr Val 1160	Asn	Phe	Val	Gly Ly 116		sp	Ser	Tyr	Val Glu 1170
Leu	Ala	Ser	Ala Lys 1175	Val	Arg	Pro	Gln Al 118		sn	Ile	Ser	Leu Gln 1185
Val	Ala	Thr	Asp Lys 1190	Asp	Asn	Gly	Ile Le		eu	Tyr	Lys	Gly Asp 1200
Asn	Asp	Pro	Leu Ala 1205	Leu	Glu	Leu	Tyr Gl 121		ly	His	Val	Arg Leu 1215
Val	Tyr	Asp	Ser Leu 1220	Ser	Ser	Pro	Pro Th		hr	Val	Tyr	Ser Val 1230
Glu	Thr	Val	Asn Asp 1235	Gly	Gln	Phe	His Se 124		al	Glu	Leu	Val Thr 1245
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Ser	Leu	Gly	Lys Leu 1265	Gln	Lys	Gln	Pro Al 127		al	Gly	Ile	Asn Ser 1275
Pro	Leu	Tyr	Leu Gly 1280	Gly	Ile	Pro	Thr Se		nr	Gly	Leu	Ser Ala 1290
Leu	Arg	Gln	Gly Thr 1295	Asp	Arg	Pro	Leu Gl 130		lу	Phe	His	Gly Cys 1305
Ile	His	Glu	Val Arg 1310	Ile	Asn	Asn	Glu Le 131		ln	Asp	Phe	Lys Ala 1320
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Thr Val Cys Lys His Gly Leu Cys Arg Ser Val Glu Lys Asp Ser 1340 1345 1350

Val Val Cys Glu Cys Arg Pro Gly Trp Thr Gly Pro Leu Cys Asp 1355 1360 1365

Gln Glu Ala Arg Asp Pro Cys Leu Gly His Arg Cys His His Gly 1370 1375 1380

Lys Cys Val Ala Thr Gly Thr Ser Tyr Met Cys Lys Cys Ala Glu 1385 1390 1395

Gly Tyr Gly Gly Asp Leu Cys Asp Asn Lys Asn Asp Ser Ala Asn 1400 1405

Ala Cys Ser Ala Phe Lys Cys His His Gly Gln Cys His Ile Ser 1415 1420 1425

Asp Gln Gly Glu Pro Tyr Cys Leu Cys Gln Pro Gly Phe Ser Gly 1430 1435 1440

Glu His Cys Gln Gln Glu Asn Pro Cys Leu Gly Gln Val Val Arg \$1445\$ \$1450\$

Glu Val Ile Arg Arg Gln Lys Gly Tyr Ala Ser Cys Ala Thr Ala 1460 1465 1470

Ser Lys Val Pro Ile Met Glu Cys Arg Gly Gly Cys Gly Pro Gln 1475 1480 1485

Cys Cys Gln Pro Thr Arg Ser Lys Arg Arg Lys Tyr Val Phe Gln 1490 1495 1500

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<211> 24

<212> DNA

<213> Artificial

<220>

<221> Artificial Sequence

<222> 1-24

<223> Synthetic construct.

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<210> 200

<211> 24

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<213> Artificial

<220>

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<222> 1-24
<223> Synthetic construct.
<400> 200
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<210> 201
<211> 50
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-50
<223> Synthetic construct.
<400> 201
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<210> 202
<211> 753
<212> DNA
<213> Homo sapiens
<400> 202
 ggatgcagga cgctcccctg agctgcctgt caccgactag gtggagcagt 50
 gtttcttccg cagactcaac tgagaagtca gcctctgggg caggcaccag 100
 gaatctgcct tttcagttct gtctccggca ggctttgagg atgaaggctg 150
 cgggcattct gaccctcatt ggctgcctgg tcacaggcgc cgagtccaaa 200
 atctacactc gttgcaaact ggcaaaaata ttctcgaggg ctggcctgga 250
 caattactgg ggcttcagcc ttggaaactg gatctgcatg gcatattatg 300
 agageggeta caacaceaca geceegaegg teetggatga eggeageate 350
 gactatggca tettecagat caacagette gegtggtgca gacgeggaaa 400
 gctgaaggag aacaaccact gccatgtcgc ctgctcagcc ttgatcactg 450
 atgacctcac agatgcaatt atctgtgcca ggaaaattgt taaagagaca 500
 caaggaatga actattggca aggctggaag aaacattgtg agggcagaga 550
 cctgtccgag tggaaaaaag gctgtgaggt ttcctaaact ggaactggac 600
ccaggatgct ttgcagcaac gccctaggat ttgcagtgaa tgtccaaatg 650
cctgtgtcat cttgtcccgt ttcctcccaa tattccttct caaacttgga 700
gagggaaaat taagctatac ttttaagaaa ataaatattt ccatttaaat 750
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<210> 203
<211> 148
<212> PRT
<213> Homo sapiens
<400> 203
 Met Lys Ala Ala Gly Ile Leu Thr Leu Ile Gly Cys Leu Val Thr
 Gly Ala Glu Ser Lys Ile Tyr Thr Arg Cys Lys Leu Ala Lys Ile
 Phe Ser Arg Ala Gly Leu Asp Asn Tyr Trp Gly Phe Ser Leu Gly
 Asn Trp Ile Cys Met Ala Tyr Tyr Glu Ser Gly Tyr Asn Thr Thr
 Ala Pro Thr Val Leu Asp Asp Gly Ser Ile Asp Tyr Gly Ile Phe
 Gln Ile Asn Ser Phe Ala Trp Cys Arg Arg Gly Lys Leu Lys Glu
 Asn Asn His Cys His Val Ala Cys Ser Ala Leu Ile Thr Asp Asp
 Leu Thr Asp Ala Ile Ile Cys Ala Arg Lys Ile Val Lys Glu Thr
                                      115
 Gln Gly Met Asn Tyr Trp Gln Gly Trp Lys Lys His Cys Glu Gly
                                                          135
 Arg Asp Leu Ser Glu Trp Lys Lys Gly Cys Glu Val Ser
                 140
<210> 204
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 204
gcaggctttg aggatgaagg ctgc 24
<210> 205
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
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<400> 205
 ctcattggct gcctggtcac aggc 24
<210> 206
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 206
ccagtcggac aggtctctcc cctc 24
<210> 207
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 207
tcagtgacca aggctgagca ggcg 24
<210> 208
<211> 47
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-47
<223> Synthetic construct.
ctacactcgt tgcaaactgg caaaaatatt ctcgagggct ggcctgg 47
<210> 209
<211> 1648
<212> DNA
<213> Homo sapiens
<400> 209
caggccattt gcatcccact gtccttgtgt tcggagccag gccacaccgt 50
cctcagcagt gtcatgtgtt aaaaacgcca agctgaatat atcatgcccc 100
tattaaaact tgtacatggc tccccattgg tttttggaga aaagttcaag 150
ctttttacct tggtgtctgc ctgtatccca gtgttcaggc tggctagacg 200
 gcggaagaag atcctatttt actgtcactt cccagatctg cttctcacca 250
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agagagattc ttttcttaaa cgactataca gggccccaat tgactggata 300 gaggaataca ccacaggcat ggcagactgc atcttagtca acagccagtt 350 cacagctgct gtttttaagg aaacattcaa gtccctgtct cacatagacc 400 ctgatgtcct ctatccatct ctaaatgtca ccagctttga ctcagttgtt 450 cctgaaaagc tggatgacct agtccccaag gggaaaaaat tcctgctgct 500 ctccatcaac agatacgaaa ggaagaaaaa tctgactttg gcactggaag 550 ccctagtaca gctgcgtgga agattgacat cccaagattg ggagagggtt 600 catctgatcg tggcaggtgg ttatgacgag agagtcctgg agaatgtgga 650 acattatcag gaattgaaga aaatggtcca acagtccgac cttggccagt 700 atgtgacctt cttgaggtct ttctcagaca aacagaaaat ctccctcctc 750 cacagctgca cgtgtgtgct ttacacacca agcaatgagc actttggcat 800 tgtccctctg gaagccatgt acatgcagtg cccagtcatt gctgttaatt 850 cgggtggacc cttggagtcc attgaccaca gtgtcacagg gtttctgtgt 900 gagcctgacc cggtgcactt ctcagaagca atagaaaagt tcatccgtga 950 acctteetta aaageeacea tgggeetgge tggaagagee agagtgaagg 1000 aaaaattttc ccctgaagca tttacagaac agctctaccg atatgttacc 1050 aaactgctgg tataatcaga ttgtttttaa gatctccatt aatgtcattt 1100 ttatggattg tagacccagt tttgaaacca aaaaagaaac ctagaatcta 1150 atgcagaaga gatcttttaa aaaataaact tgagtcttga atgtgagcca 1200 ctttcctata taccacacct ccctgtccac ttttcagaaa aaccatgtct 1250 tttatgctat aatcattcca aattttgcca gtgttaagtt acaaatgtgg 1300 tgtcattcca tgttcagcag agtattttaa ttatattttc tcgggattat 1350 tgctcttctg tctataaatt ttgaatgata ctgtgcctta attggttttc 1400 atagtttaag tgtgtatcat tatcaaagtt gattaatttg gcttcatagt 1450 ataatgagag cagggctatt gtagttccca gattcaatcc accgaagtgt 1500 tcactgtcat ctgttaggga atttttgttt gtcctgtctt tgcctggatc 1550 catagogaga gtgctctgta tttttttaa gataatttgt atttttgcac 1600 actgagatat aataaaaggt gtttatcata aaaaaaaaa aaaaaaaa 1648

<210> 210 <211> 323

<212> PRT <213> Homo sapiens

<400> 210 Met Pro Leu Lys Leu Val His Gly Ser Pro Leu Val Phe Gly Glu Lys Phe Lys Leu Phe Thr Leu Val Ser Ala Cys Ile Pro Val Phe Arg Leu Ala Arg Arg Lys Lys Ile Leu Phe Tyr Cys His Phe Pro Asp Leu Leu Thr Lys Arg Asp Ser Phe Leu Lys Arg Leu Tyr Arg Ala Pro Ile Asp Trp Ile Glu Glu Tyr Thr Thr Gly Met Ala Asp Cys Ile Leu Val Asn Ser Gln Phe Thr Ala Ala Val Phe Lys Glu Thr Phe Lys Ser Leu Ser His Ile Asp Pro Asp Val 100 Leu Tyr Pro Ser Leu Asn Val Thr Ser Phe Asp Ser Val Val Pro 110 Glu Lys Leu Asp Asp Leu Val Pro Lys Gly Lys Lys Phe Leu Leu Leu Ser Ile Asn Arg Tyr Glu Arg Lys Lys Asn Leu Thr Leu Ala 140 Leu Glu Ala Leu Val Gln Leu Arg Gly Arg Leu Thr Ser Gln Asp 155 Trp Glu Arg Val His Leu Ile Val Ala Gly Gly Tyr Asp Glu Arg 170 Val Leu Glu Asn Val Glu His Tyr Gln Glu Leu Lys Lys Met Val 185 Gln Gln Ser Asp Leu Gly Gln Tyr Val Thr Phe Leu Arg Ser Phe 200 205 Ser Asp Lys Gln Lys Ile Ser Leu Leu His Ser Cys Thr Cys Val 225 Leu Tyr Thr Pro Ser Asn Glu His Phe Gly Ile Val Pro Leu Glu 235 Ala Met Tyr Met Gln Cys Pro Val Ile Ala Val Asn Ser Gly Gly 245 255 Pro Leu Glu Ser Ile Asp His Ser Val Thr Gly Phe Leu Cys Glu 270 260 265

Pro Asp Pro Val His Phe Ser Glu Ala Ile Glu Lys Phe Ile Arg 275 280 285

Glu Pro Ser Leu Lys Ala Thr Met Gly Leu Ala Gly Arg Ala Arg 290 295 300

Val Lys Glu Lys Phe Ser Pro Glu Ala Phe Thr Glu Gln Leu Tyr 305 310 315

Arg Tyr Val Thr Lys Leu Leu Val 320

<210> 211

<211> 1554

<212> DNA

<213> Homo sapiens

<400> 211

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<210> 212

<211> 462

<212> PRT

<213> Homo sapiens

<400> 212

Met Leu Asp Phe Ala Ile Phe Ala Val Thr Phe Leu Leu Ala Leu
1 5 10 15

Val Gly Ala Val Leu Tyr Leu Tyr Pro Ala Ser Arg Gln Ala Ala 20 25 30

Gly Ile Pro Gly Ile Thr Pro Thr Glu Glu Lys Asp Gly Asn Leu
35

Pro Asp Ile Val Asn Ser Gly Ser Leu His Glu Phe Leu Val Asn 50 55 60

Leu His Glu Arg Tyr Gly Pro Val Val Ser Phe Trp Phe Gly Arg
65 70 75

Arg Leu Val Val Ser Leu Gly Thr Val Asp Val Leu Lys Gln His

Ile Asn Pro Asn Lys Thr Ser Asp Pro Phe Glu Thr Met Leu Lys 95 100 105

Ser Leu Leu Arg Tyr Gln Ser Gly Gly Gly Ser Val Ser Glu Asn 110 115 120

His Met Arg Lys Lys Leu Tyr Glu Asn Gly Val Thr Asp Ser Leu 125 130 135

Lys Ser Asn Phe Ala Leu Leu Leu Lys Leu Ser Glu Glu Leu Leu

				140					145					150
Asp	Lys	Trp	Leu	Ser 155	Tyr	Pro	Glu	Thr	Gln 160	His	Val	Pro	Leu	Se:
Gln	His	Met	Leu	Gly 170	Phe	Ala	Met	Lys	Ser 175	Val	Thr	Gln	Met	Val 180
Met	Gly	Ser	Thr	Phe 185	Glu	Asp	Asp	Gln	Glu 190	Val	Ile	Arg	Phe	Glr 195
Lys	Asn	His	Gly	Thr 200	Val	Trp	Ser	Glu	Ile 205	Gly	Lys	Gly	Phe	Let 210
Asp	Gly	Ser	Leu	Asp 215	Lys	Asn	Met	Thr	Arg 220	Lys	Lys	Gln	Tyr	Glu 225
Asp	Ala	Leu	Met	Gln 230	Leu	Glu	Ser	Val	Leu 235	Arg	Asn	Ile	Ile	Lys 240
Glu	Arg	Lys	Gly	Arg 245	Asn	Phe	Ser	Gln	His 250	Ile	Phe	Ile	Asp	Ser 255
Leu	Val	Gln	Gly	Asn 260	Leu	Asn	Asp	Gln	Gln 265	Ile	Leu	Glu	Asp	Ser 270
Met	Ile	Phe	Ser	Leu 275	Ala	Ser	Cys	Ile	Ile 280	Thr	Ala	Lys	Leu	Cys 285
Thr	Trp	Ala	Ile	Cys 290	Phe	Leu	Thr	Thr	Ser 295	Glu	Glu	Val	Gln	300
Lys	Leu	Tyr	Glu	Glu 305	Ile	Asn	Gln	Val	Phe 310	Gly	Asn	Gly	Pro	Val 315
Thr	Pro	Glu	Lys	Ile 320	Glu	Gln	Leu	Arg	Tyr 325	Cys	Gln	His	Val	1eu
			Val	335					340					345
Leu	Gln	Asp	Ile	Glu 350	Gly	Lys	Ile	Asp	Arg 355	Phe	Ile	Ile	Pro	Arg 360
Glu	Thr	Leu	Val	Leu 365	Tyr	Ala	Leu	Gly	Val 370	Val	Leu	Gln	Asp	Pro 375
Asn	Thr	Trp	Pro	Ser 380	Pro	His	Lys	Phe	Asp 385	Pro	Asp	Arg	Phe	Asp 390
Asp	Glu	Leu	Val	Met 395	Lys	Thr	Phe	Ser	Ser 400	Leu	Gly	Phe	Ser	Gly 405
Thr	Gln	Glu	Cys	Pro 410	Glu	Leu	Arg	Phe	Ala 415	Tyr	Met	Val	Thr	Thr 420
Val	Leu	Leu	Ser	Val 425	Leu	Val	Lys	Arg	Leu 430	His	Leu	Leu	Ser	Val

Glu Gly Gln Val Ile Glu Thr Lys Tyr Glu Leu Val Thr Ser Ser 440 445 450

Arg Glu Glu Ala Trp Ile Thr Val Ser Lys Arg Tyr
455 460

<210> 213

<211> 759

<212> DNA

<213> Homo sapiens

<400> 213

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tecageetea gagaeegeeg eeettgteee egagggeeat gggeegggte 100
teagggettg tgeeeteteg etteetgaeg eteetggege atetggtggt 150
egteateace ttattetggt eeegggaeag eaacatacag geetgeetge 200
eteteacgtt eaeeeeegag gagtatgaea ageaggaeat teagetggtg 250
geeggeetet etgteaceet gggeetettt geagtggage tggeeggttt 300
eeteteagga gteteeatgt teaacageae eeaggeete ateteeattg 350
gggeteactg tagtgeatee gtggeeetgt eettetteat attegagegt 400
tgggagtgea etaegtattg gtacatttt gtettetgea gtgeeettee 450
ageetgteact gaaatggett tattegteae egtetttggg etgaaaaaga 500
aaeeettetg attacettea tgaegggaae etaaggaega ageetaeagg 550
ggeaagggee gettegtatt eetggaagaa ggaaggeata ggetteggtt 600
tteeeetegg aaaetgette tgetggagga tatgtgttgg aataattaeg 650
tettgagtet gggattatee geattgtatt tagtgetttg taataaaata 700
tgttttgtag taacattaag aettatatae agttttaggg gacaattaaa 750

<210> 214

<211> 140

<212> PRT

<213> Homo sapiens

aaaaaaaaa 759

<400> 214

Met Gly Arg Val Ser Gly Leu Val Pro Ser Arg Phe Leu Thr Leu 1 5 10 15

Leu Ala His Leu Val Val Val Ile Thr Leu Phe Trp Ser Arg Asp 20 25 30

Ser Asn Ile Gln Ala Cys Leu Pro Leu Thr Phe Thr Pro Glu Glu
35 40 45

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Tyr Asp Lys Gln Asp Ile Gln Leu Val Ala Ala Leu Ser Val Thr
 Leu Gly Leu Phe Ala Val Glu Leu Ala Gly Phe Leu Ser Gly Val
 Ser Met Phe Asn Ser Thr Gln Ser Leu Ile Ser Ile Gly Ala His
                                                        90
 Cys Ser Ala Ser Val Ala Leu Ser Phe Phe Ile Phe Glu Arg Trp
                 95
                                    100
                                                       105
 Glu Cys Thr Thr Tyr Trp Tyr Ile Phe Val Phe Cys Ser Ala Leu
                                                       120
 Pro Ala Val Thr Glu Met Ala Leu Phe Val Thr Val Phe Gly Leu
                                    130
Lys Lys Lys Pro Phe
<210> 215
<211> 697
<212> DNA
<213> Homo sapiens
<400> 215
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cctgggctct ccccagcctc cttcgactcg gagcggctca ggagacagaa 100
gacccggcct gctgcagccc catagtgccc cggaacgagt ggaaggccct 150
ggcatcagag tgcgcccagc acctgagcct gcccttacgc tatgtggtgg 200
tategeacae ggegggeage agetgeaaca ecceegeete gtgeeageag 250
caggecegga atgtgeagea etaceaeatg aagacaetgg getggtgega 300
cgtgggctac aacttcctga ttggagaaga cgggctcgta tacgagggcc 350
gtggctggaa cttcacgggt gcccactcag gtcacttatg gaaccccatg 400
tccattggca tcagcttcat gggcaactac atggatcggg tgcccacacc 450
ccaggccatc cgggcagccc agggtctact ggcctgcggt gtggctcagg 500
gagecetgag gtecaactat gtgeteaaag gacaceggga tgtgeagegt 550
acactetete caggeaacca getetaceae etcatecaga attggecaca 600
catggccaaa aaccccactg tctccttctc caataaagat gtagctc 697
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<210> 216

<211> 196

<212> PRT

<213> Homo sapiens

<400> 216 Met Ser Arg Arg Ser Met Leu Leu Ala Trp Ala Leu Pro Ser Leu Leu Arg Leu Gly Ala Ala Gln Glu Thr Glu Asp Pro Ala Cys Cys Ser Pro Ile Val Pro Arg Asn Glu Trp Lys Ala Leu Ala Ser Glu Cys Ala Gln His Leu Ser Leu Pro Leu Arg Tyr Val Val Ser 60 His Thr Ala Gly Ser Ser Cys Asn Thr Pro Ala Ser Cys Gln Gln 75 Gln Ala Arg Asn Val Gln His Tyr His Met Lys Thr Leu Gly Trp 85 90 Cys Asp Val Gly Tyr Asn Phe Leu Ile Gly Glu Asp Gly Leu Val Tyr Glu Gly Arg Gly Trp Asn Phe Thr Gly Ala His Ser Gly His 120 Leu Trp Asn Pro Met Ser Ile Gly Ile Ser Phe Met Gly Asn Tyr 135 Met Asp Arg Val Pro Thr Pro Gln Ala Ile Arg Ala Ala Gln Gly 150 Leu Leu Ala Cys Gly Val Ala Gln Gly Ala Leu Arg Ser Asn Tyr 160 165 Val Leu Lys Gly His Arg Asp Val Gln Arg Thr Leu Ser Pro Gly 175 180 Asn Gln Leu Tyr His Leu Ile Gln Asn Trp Pro His Tyr Arg Ser

Pro

<210> 217

<211> 1871

<212> DNA

<213> Homo sapiens

<400> 217

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190

gcggggccac atctcaccta agtcccgccc catggccaat tccactctcc 250 tagggctgct ggccccgcct ggggaggctt ggggcattct tgggcagccc 300 cccaaccgcc cgaaccacag cccccaccc tcagccaagg tgaagaaaat 350 ctttggctgg ggcgacttct actccaacat caagacggtg gccctgaacc 400 tgctcgtcac agggaagatt gtggaccatg gcaatgggac cttcagcgtc 450 cacttccaac acaatgccac aggccaggga aacatctcca tcagcctcgt 500 gccccccagt aaagctgtag agttccacca ggaacagcag atcttcatcg 550 aagccaaggc ctccaaaatc ttcaactgcc ggatggagtg ggagaaggta 600 gaacggggcc gccggacctc gctttgcacc cacgacccag ccaagatctg 650 ctcccgagac cacgctcaga gctcagccac ctggagctgc tcccagccct 700 tcaaagtcgt ctgtgtctac atcgccttct acagcacgga ctatcggctg 750 gtccagaagg tgtgcccaga ttacaactac catagtgata ccccctacta 800 ggacaggect geccatgeag gagaceatet ggacaeeggg cagggaaggg 900 gttgggcctc aggcagggag gggggtggag acgaggagat gccaagtggg 950 gccagggcca agtctcaagt ggcagagaaa gggtcccaag tgctggtccc 1000 aacctgaagc tgtggagtga ctagatcaca ggagcactgg aggaggagtg 1050 ggctctctgt gcagcctcac agggctttgc cacggagcca cagagagatg 1100 ctgggtcccc gaggcctgtg ggcaggccga tcagtgtggc cccagatcaa 1150 gtcatgggag gaagctaagc cettggttet tgecateetg aggaaagata 1200 gcaacaggga gggggagatt tcatcagtgt ggacagcctg tcaacttagg 1250 gccagaggag ctctccagcc ctgcctagtg ggcgccctga gccccttgtc 1350 gtgtgctgag catggcatga ggctgaagtg gcaaccctgg ggtctttgat 1400 gtcttgacag attgaccatc tgtctccagc caggccaccc ctttccaaaa 1450 ttccctcttc tgccagtact ccccctgtac cacccattgc tgatggcaca 1500 cccatcctta agctaagaca ggacgattgt ggtcctccca cactaaggcc 1550 acageceate egegtgetgt gtgtecetet tecaceceaa eccetgetgg 1600 ctcctctggg agcatccatg tcccggagag gggtccctca acagtcagcc 1650

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<210> 218

<211> 252

<212> PRT

<213> Homo sapiens

<400> 218

Met Gln Leu Thr Arg Cys Cys Phe Val Phe Leu Val Gln Gly Ser 1 5 10

Leu Tyr Leu Val Ile Cys Gly Gln Asp Asp Gly Pro Pro Gly Ser 20 25 30

Glu Asp Pro Glu Arg Asp Asp His Glu Gly Gln Pro Arg Pro Arg
35

Val Pro Arg Lys Arg Gly His Ile Ser Pro Lys Ser Arg Pro Met 50 55 60

Ala Asn Ser Thr Leu Leu Gly Leu Leu Ala Pro Pro Gly Glu Ala 65 70 75

Trp Gly Ile Leu Gly Gln Pro Pro Asn Arg Pro Asn His Ser Pro 80 85 90

Pro Pro Ser Ala Lys Val Lys Lys Ile Phe Gly Trp Gly Asp Phe 95 100 105

Tyr Ser Asn Ile Lys Thr Val Ala Leu Asn Leu Leu Val Thr Gly 110 115 120

Lys Ile Val Asp His Gly Asn Gly Thr Phe Ser Val His Phe Gln 125 130 135

His Asn Ala Thr Gly Gln Gly Asn Ile Ser Ile Ser Leu Val Pro 140 145 150

Pro Ser Lys Ala Val Glu Phe His Gln Glu Gln Gln Ile Phe Ile 155 160 165

Glu Ala Lys Ala Ser Lys Ile Phe Asn Cys Arg Met Glu Trp Glu 170 175 180

Lys Val Glu Arg Gly Arg Arg Thr Ser Leu Cys Thr His Asp Pro 185 190 195

Ala Lys Ile Cys Ser Arg Asp His Ala Gln Ser Ser Ala Thr Trp 200 205 210

Ser Cys Ser Gln Pro Phe Lys Val Val Cys Val Tyr Ile Ala Phe \$215\$ \$220\$ \$225

Tyr Ser Thr Asp Tyr Arg Leu Val Gln Lys Val Cys Pro Asp Tyr 230 235 240

Asn Tyr His Ser Asp Thr Pro Tyr Tyr Pro Ser Gly 245 250

<210> 219

<211> 2065

<212> DNA

<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

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 Phe Thr Leu Glu Ser Val Phe Val Ala Pro Arg Lys Gly Ile Tyr
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 Ser Phe Ser Phe His Val Ile Lys Val Tyr Gln Ser Gln Thr Ile
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 Gln Val Asn Leu Met Leu Asn Gly Lys Pro Val Ile Ser Ala Phe
 Ala Gly Asp Lys Asp Val Thr Arg Glu Ala Ala Thr Asn Gly Val
 Leu Leu Tyr Leu Asp Lys Glu Asp Lys Val Tyr Leu Lys Leu Glu
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<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

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Ser	Phe	Glu	Asn	Val 365	Ser	Gly	Ser	Thr	Asp 370		Leu	Val	Asp	Ser 375
Ala	Gly	Thr	Gly	Asp 380	Leu	Ser	Tyr	Gly	Tyr 385		Gly	Arg	Ser	Phe 390
Glu	Pro	Val	Gly	Thr 395	Arg	Pro	Arg	Val	Asp 400		Met	Ser	Ser	Val 405
Glu	Glu	Asp	Asp	Tyr 410	Asp	Thr	Leu	Thr	Asp 415		Asp	Ser	Asp	Lys 420
Asn	Val	Ile	Arg	Thr 425	Lys	Gln	Tyr	Leu	Tyr 430	Val	Ala	Asp	Leu	Ala 435
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Gln	Asp	Ile	Cys	Tyr 485	Tyr	Asn	Phe	Leu	Cys 490	Ala	His	Pro	Leu	Gly 495
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Cys Ile Arg Gln Cys Ser Gly Pro Leu Tyr Val Asp Arg Met Val
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Gly Leu Ile Met Arg Pro Asn Asp Phe Ala Ser Tyr Leu Leu Ala
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Met Lys Leu Arg Ser Gly Glu Arg Ile Lys Leu Ile Pro Leu Leu
Cys Ile Val Cys Thr Ser Val Val Trp Gly Phe Ala Leu Phe Phe
Phe Phe Gln Gly Leu Ser Thr Trp Gln Lys Thr Pro Ala Glu Ser
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His Asp Ile Trp His Phe Leu Ser Ser Ile Ala Met Phe Gly Ser
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<212> DNA

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<212> PRT

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<400> 229

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Leu	Pro	Arg	Glu	Gly 50	Ala	Glu	Gly	Gln	Ile 55	Val	Leu	Ser	Gly	Asp 60
Ser	Gly	Lys	Ala	Thr 65	Glu	Gly	Pro	Phe	Ala 70	Met	Asp	Pro	Asp	Ser 75
Gly	Phe	Leu	Leu	Val 80	Thr	Arg	Ala	Leu	Asp 85	Arg	Glu	Glu	Gln	Ala 90
Glu	Tyr	Gln	Leu	Gln 95	Val	Thr	Leu	Glu	Met 100	Gln	Asp	Gly	His	Val 105
Leu	Trp	Gly	Pro	Gln 110	Pro	Val	Leu	Val	His 115	Val	Lys	Asp	Glu	Asn 120
Asp	Gln	Val	Pro	His 125	Phe	Ser	Gln	Ala	Ile 130	Tyr	Arg	Ala	Arg	Leu 135
Ser	Arg	Gly	Thr	Arg 140	Pro	Gly	Ile	Pro	Phe 145	Leu	Phe	Leu	Glu	Ala 150
Ser	Asp	Arg	Asp	Glu 155	Pro	Gly	Thr	Ala	Asn 160	Ser	Asp	Leu	Arg	Phe 165
His	Ile	Leu	Ser	Gln 170	Ala	Pro	Ala	Gln	Pro 175	Ser	Pro	Asp	Met	Phe 180
Gln	Leu	Glu	Pro	Arg 185	Leu	Gly	Ala	Leu	Ala 190	Leu	Ser	Pro	Lys	Gly 195
Ser	Thr	Ser	Leu	Asp 200	His	Ala	Leu	Glu	Arg 205	Thr	Tyr	Gln	Leu	Leu 210
Val	Gln	Val	Lys	Asp 215	Met	Gly	Asp	Gln	Ala 220	Ser	Gly	His	Gln	Ala 225

Gln Leu Glu Pro Arg Leu Gly Ala Leu Ala Leu Ser Pro Lys Gly 195

Ser Thr Ser Leu Asp 200 His Ala Leu Glu Arg Thr Tyr Gln Leu Leu 210

Val Gln Val Lys Asp Met Gly Asp Gln Ala Ser Gly His Gln Ala 225

Thr Ala Thr Val Glu Val Ser Ile Ile Glu Ser Thr Trp Val Ser 230

Leu Glu Pro Ile His Leu Ala Glu Asn Leu Lys Val Leu Tyr Pro 255

His His Met Ala Gln Val His Trp Ser Gly Gly Asp Val His Tyr 270

His Leu Glu Ser His Pro Pro Gly Pro Phe Glu Val Asn Ala Glu 285

Gly Asn Leu Tyr Val Thr Arg Glu Leu Asp Arg Glu Ala Gln Ala 300

Glu Tyr Leu Leu Gln Val Arg Ala Gln Asn Ser His Gly Glu Asp 315

Tyr Ala Ala	Pro Leu 320		Leu	His	Val	Leu 325	Val	Met	Asp	Glu	Asn 330
Asp Asn Val	Pro Ile 335	_	Pro	Pro	Arg	Asp 340	Pro	Thr	Val	Ser	Ile 345
Pro Glu Leu	Ser Pro		Gly	Thr	Glu	Val 355	Thr	Arg	Leu	Ser	Ala 360
Glu Asp Ala	Asp Ala 365		Gly	Ser	Pro	Asn 370	Ser	His	Val	Val	Tyr 375
Gln Leu Leu	Ser Pro		Pro	Glu	Asp	Gly 385	Val	Glu	Gly	Arg	Ala 390
Phe Gln Val	Asp Pro		Ser	Gly	Ser	Val 400	Thr	Leu	Gly	Val	Leu 405
Pro Leu Arg	Ala Gly 410		Asn	Ile	Leu	Leu 415	Leu	Val	Leu	Ala	Met 420
Asp Leu Ala	Gly Ala 425		Gly	Gly	Phe	Ser 430	Ser	Thr	Cys	Glu	Val 435
Glu Val Ala	Val Thr 440		Ile	Asn	Asp	His 445	Ala	Pro	Glu	Phe	Ile 450
Thr Ser Gln	Ile Gly 455		Ile	Ser	Leu	Pro 460	Glu	Asp	Val	Glu	Pro 465
Gly Thr Leu	Val Ala 470		Leu	Thr	Ala	Ile 475	Asp	Ala	Asp	Leu	Glu 480
Pro Ala Phe	Arg Let 485		Asp	Phe	Ala	Ile 490	Glu	Arg	Gly	Asp	Thr 495
Glu Gly Thr	Phe Gly		Asp	Trp	Glu	Pro 505	Asp	Ser	Gly	His	Val 510
Arg Leu Arg	Leu Cys 515		Asn	Leu	Ser	Tyr 520	Glu	Ala	Ala	Pro	Ser 525
His Glu Val	Val Val 530		Val	Gln	Ser	Val 535	Ala	Lys	Leu	Val	Gly 540
Pro Gly Pro	Gly Pro		Ala	Thr	Ala	Thr 550	Val	Thr	Val	Leu	Val 555
Glu Arg Val	Met Pro		Pro	Lys	Leu	Asp 565	Gln	Glu	Ser	Tyr	Glu 570
Ala Ser Val	Pro Ile 575		Ala	Pro	Ala	Gly 580	Ser	Phe	Leu	Leu	Thr 585
Ile Gln Pro	Ser Asp 590		Ile	Ser	Arg	Thr 595	Leu	Arg	Phe	Ser	Leu 600
Val Asn Asp	Ser Glu	Gly	Trp	Leu	Cys	Ile	Glu	Lys	Phe	Ser	Gly

605 610 615 Glu Val His Thr Ala Gln Ser Leu Gln Gly Ala Gln Pro Gly Asp 620 Thr Tyr Thr Val Leu Val Glu Ala Gln Asp Thr Ala Leu Thr Leu 640 Ala Pro Val Pro Ser Gln Tyr Leu Cys Thr Pro Arg Gln Asp His 655 Gly Leu Ile Val Ser Gly Pro Ser Lys Asp Pro Asp Leu Ala Ser 670 Gly His Gly Pro Tyr Ser Phe Thr Leu Gly Pro Asn Pro Thr Val Gln Arg Asp Trp Arg Leu Gln Thr Leu Asn Gly Ser His Ala Tyr 695 Leu Thr Leu Ala Leu His Trp Val Glu Pro Arg Glu His Ile Ile 710 Pro Val Val Ser His Asn Ala Gln Met Trp Gln Leu Leu Val Arg Val Ile Val Cys Arg Cys Asn Val Glu Gly Gln Cys Met Arg Lys Val Gly Arg Met Lys Gly Met Pro Thr Lys Leu Ser Ala Val Gly Ile Leu Val Gly Thr Leu Val Ala Ile Gly Ile Phe Leu Ile 770 Leu Ile Phe Thr His Trp Thr Met Ser Arg Lys Lys Asp Pro Asp Gln Pro Ala Asp Ser Val Pro Leu Lys Ala Thr Val 800 805 <210> 230 <211> 50 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-50 <223> Synthetic construct. cgccttaccg cgcagcccga agattcacta tggtgaaaat cgccttcaat 50 <210> 231 <211> 24 <212> DNA

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<211> 421

<212> PRT

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<400> 234

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Cys Gly Gln Glu Lys Phe Phe Gly Asp Gln Val Leu Arg Ile Asn 20 25 30

Val Arg Asn Gly Asp Glu Ile Ser Lys Leu Ser Gln Leu Val Asn 35 40 45

Ser Asn Asn Leu Lys Leu Asn Phe Trp Lys Ser Pro Ser Ser Phe 50 55 60

Asn Arg Pro Val Asp Val Leu Val Pro Ser Val Ser Leu Gln Ala 65 70 75

Phe Lys Ser Phe Leu Arg Ser Gln Gly Leu Glu Tyr Ala Val Thr 80 85 90

Ile Glu Asp Leu Gln Ala Leu Leu Asp Asn Glu Asp Asp Glu Met
95 100 105

Gln His Asn Glu Gly Gln Glu Arg Ser Ser Asn Asn Phe Asn Tyr 110 115 120

Gly Ala Tyr His Ser Leu Glu Ala Ile Tyr His Glu Met Asp Asn 125 130 135

Ile Ala Ala Asp Phe Pro Asp Leu Ala Arg Arg Val Lys Ile Gly 140 145 150

His Ser Phe Glu Asn Arg Pro Met Tyr Val Leu Lys Phe Ser Thr 155 160 165

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Gly Lys Gly Val Arg Arg Pro Ala Val Trp Leu Asn Ala Gly Ile
His Ser Arg Glu Trp Ile Ser Gln Ala Thr Ala Ile Trp Thr Ala
Arg Lys Ile Val Ser Asp Tyr Gln Arg Asp Pro Ala Ile Thr Ser
Ile Leu Glu Lys Met Asp Ile Phe Leu Leu Pro Val Ala Asn Pro
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Asp Gly Tyr Val Tyr Thr Gln Thr Gln Asn Arg Leu Trp Arg Lys
Thr Arg Ser Arg Asn Pro Gly Ser Ser Cys Ile Gly Ala Asp Pro
                245
Asn Arg Asn Trp Asn Ala Ser Phe Ala Gly Lys Gly Ala Ser Asp
                260
                                                         270
Asn Pro Cys Ser Glu Val Tyr His Gly Pro His Ala Asn Ser Glu
Val Glu Val Lys Ser Val Val Asp Phe Ile Gln Lys His Gly Asn
                290
                                                         300
Phe Lys Gly Phe Ile Asp Leu His Ser Tyr Ser Gln Leu Leu Met
                305
Tyr Pro Tyr Gly Tyr Ser Val Lys Lys Ala Pro Asp Ala Glu Glu
Leu Asp Lys Val Ala Arg Leu Ala Ala Lys Ala Leu Ala Ser Val
Ser Gly Thr Glu Tyr Gln Val Gly Pro Thr Cys Thr Thr Val Tyr
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Pro Ala Ser Gly Ser Ser Ile Asp Trp Ala Tyr Asp Asn Gly Ile
                365
                                                         375
Lys Phe Ala Phe Thr Phe Glu Leu Arg Asp Thr Gly Thr Tyr Gly
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                                     385
                                                         390
Phe Leu Leu Pro Ala Asn Gln Ile Ile Pro Thr Ala Glu Glu Thr
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<211> 1743

<212> DNA

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Pro Arg Pro Ser Ser Thr Lys Ser Thr Pro Ala Ser Gln Val Tyr 35 40 45

Ser Leu Asn Thr Asp Phe Ala Phe Arg Leu Tyr Arg Arg Leu Val
50 55 60

Leu Glu Thr Pro Ser Gln Asn Ile Phe Phe Ser Pro Val Ser Val 65 70 75

Ser Thr Ser Leu Ala Met Leu Ser Leu Gly Ala His Ser Val Thr 80 85 90

Lys Thr Gln Ile Leu Gln Gly Leu Gly Phe Asn Leu Thr His Thr 95 100 105

Pro Glu Ser Ala Ile His Gln Gly Phe Gln His Leu Val His Ser 110 115 120

Leu Thr Val Pro Ser Lys Asp Leu Thr Leu Lys Met Gly Ser Ala 125 130 135

Leu Phe Val Lys Lys Glu Leu Gln Leu Gln Ala Asn Phe Leu Gly 140 145 150

Asn Val Lys Arg Leu Tyr Glu Ala Glu Val Phe Ser Thr Asp Phe 155 160 165

Ser Asn Pro Ser Ile Ala Gln Ala Arg Ile Asn Ser His Val Lys 170 175 180

Lys Lys Thr Gln Gly Lys Val Val Asp Ile Ile Gln Gly Leu Asp 185 190 195

Leu Leu Thr Ala Met Val Leu Val Asn His Ile Phe Phe Lys Ala

				200					205					210
Lys	Trp	Glu	Lys	Pro 215	Phe	His	Leu	Glu	Tyr 220	Thr	Arg	Lys	Asn	Phe 225
Pro	Phe	Leu	Val	Gly 230	Glu	Gln	Val	Thr	Val 235	Gln	Val	Pro	Met	Met 240
His	Gln	Lys	Glu	Gln 245	Phe	Ala	Phe	Gly	Val 250	Asp	Thr	Glu	Leu	Asn 255
Cys	Phe	Val	Leu	Gln 260	Met	Asp	Tyr	Lys	Gly 265	Asp	Ala	Val	Ala	Phe 270
Phe	Val	Leu	Pro	Ser 275	Lys	Gly	Lys	Met	Arg 280	Gln	Leu	Glu	Gln	Ala 285
Leu	Ser	Ala	Arg	Thr 290	Leu	Ile	Lys	Trp	Ser 295	His	Ser	Leu	Gln	Lys 300
Arg	Trp	Ile	Glu	Val 305	Phe	Ile	Pro	Arg	Phe 310	Ser	Ile	Ser	Ala	Ser 315
Tyr	Asn	Leu	Glu	Thr 320	Ile	Leu	Pro	Lys	Met 325	Gly	Ile	Gln	Asn	Ala 330
Phe	Asp	Lys	Asn	Ala 335	Asp	Phe	Ser	Gly	Ile 340	Ala	Lys	Arg	Asp	Ser 345
Leu	Gln	Val	Ser	Lys 350	Ala	Thr	His	Lys	Ala 355	Val	Leu	Asp	Val	Ser 360
Glu	Glu	Gly	Thr	Glu 365	Ala	Thr	Ala	Ala	Thr 370	Thr	Thr	Lys	Phe	Ile 375
Val	Arg	Ser	Lys	Asp 380	Gly	Pro	Ser	Tyr	Phe 385	Thr	Val	Ser	Phe	Asn 390
Arg	Thr	Phe	Leu	Met 395	Met	Ile	Thr	Asn	Lys 400	Ala	Thr	Asp	Gly	Ile 405
Leu	Phe	Leu	Gly	Lys 410	Val	Glu	Asn	Pro	Thr 415	Lys	Ser			
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Ala Asn Thr Gly Ser Ser Val Ile Ser Ser Gly Ala Ser Thr Ala
35 40 45

Thr Asn Ser Gly Ser Ser Val Thr Ser Ser Gly Val Ser Thr Ala
50 55 60

Thr Ile Ser Gly Ser Ser Val Thr Ser Asn Gly Val Ser Ile Val
65 70 75

Thr Asn Ser Glu Phe His Thr Thr Ser Ser Gly Ile Ser Thr Ala Thr Asn Ser Glu Phe Ser Thr Ala Ser Ser Gly Ile Ser Ile Ala Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala Thr Asn Ser Glu Ser Ser Thr Pro Ser Ser Gly Ala Ser Thr Val 130 Thr Asn Ser Gly Ser Ser Val Thr Ser Ser Gly Ala Ser Thr Ala 145 Thr Asn Ser Glu Ser Ser Thr Val Ser Ser Arg Ala Ser Thr Ala Thr Asn Ser Glu Ser Ser Thr Leu Ser Ser Gly Ala Ser Thr Ala 170 Thr Asn Ser Asp Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala 185 Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala 200 Thr Asn Ser Glu Ser Ser Thr Val Ser Ser Arg Ala Ser Thr Ala 215 Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala 230 Thr Asn Ser Glu Ser Arg Thr Thr Ser Asn Gly Ala Gly Thr Ala Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala 260 Thr Asn Ser Asp Ser Ser Thr Val Ser Ser Gly Ala Ser Thr Ala 275 Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala 290 300 Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala Thr Asn Ser Asp Ser Ser Thr Thr Ser Ser Gly Ala Gly Thr Ala 320 330 Thr Asn Ser Glu Ser Ser Thr Val Ser Ser Gly Ile Ser Thr Val 335 Thr Asn Ser Glu Ser Ser Thr Pro Ser Ser Gly Ala Asn Thr Ala 350 360 Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Asn Thr Ala

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Thr	Asn	Ser	Glu	Ser 380	Ser	Thr	· Val	Ser	Ser 385	Gly	Ala	. Ser	Thr	Ala 390
Thr	Asn	Ser	Glu	Ser 395	Ser	Thr	Thr	Ser	Ser 400		Val	Ser	Thr	Ala 405
Thr	Asn	Ser	Glu	Ser 410	Ser	Thr	Thr	Ser	Ser 415		Ala	Ser	Thr	Ala 420
Thr	Asn	Ser	Asp	Ser 425	Ser	Thr	Thr	Ser	Ser 430		Ala	Ser	Thr	Ala 435
Thr	Asn	Ser	Glu	Ser 440	Ser	Thr	Val	Ser	Ser 445	Gly	Ile	Ser	Thr	Val 450
Thr	Asn	Ser	Glu	Ser 455	Ser	Thr	Thr	Ser	Ser 460	Gly	Ala	Asn	Thr	Ala 465
Thr	Asn	Ser	Gly	Ser 470	Ser	Val	Thr	Ser	Ala 475	Gly	Ser	Gly	Thr	Ala 480
Ala	Leu	Thr	Gly	Met 485	His	Thr	Thr	Ser	His 490	Ser	Ala	Ser	Thr	Ala 495
Val	Ser	Glu	Ala	Lys 500	Pro	Gly	Gly	Ser	Leu 505	Val	Pro	Trp	Glu	Ile 510
Phe	Leu	Ile	Thr	Leu 515	Val	Ser	Val	Val	Ala 520	Ala	Val	Gly	Leu	Phe 525
Ala	Gly	Leu	Phe	Phe 530	Cys	Val	Arg	Asn	Ser 535	Leu	Ser	Leu	Arg	Asn 540
Thr	Phe	Asn	Thr	Ala 545	Val	Tyr	His	Pro	His 550	Gly	Leu	Asn	His	Gly 555
Leu	Gly	Pro	Gly	Pro 560	Gly	Gly	Asn	His	Gly 565	Ala	Pro	His	Arg	Pro 570
Arg	Trp	Ser	Pro	Asn 575	Trp	Phe	Trp	Arg	Arg 580	Pro	Val	Ser	Ser	Ile 585
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 teceteette tgetaetggg ggeeetgtet ggatgggegg ceagegatga 150
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ctgggaagga agcagagaaa cttggccaag gggtcaacca tgctgctgac 550
caggctggaa aggaagtgga gaagcttggc caaggtgccc accatgctgc 600
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tggccaggcc gggaaggagc tgcagaatgc tcataatggg gtcaaccaag 650 ccagcaagga ggccaaccag ctgctgaatg gcaaccatca aagcggatct 700 tccagccatc aaggagggc cacaaccacg ccgttagcct ctggggcctc 750 agtcaacacg cctttcatca accttcccgc cctgtggagg agcgtcgcca 800 acatcatgcc ctaaactggc atccggcctt gctgggagaa taatgtcgcc 850 gttgtcacat cagctgacat gacctggagg ggttggggt gggggacagg 900 tttctgaaat ccctgaaggg ggttgtactg ggatttgtga ataaacttga 950 tacacca 957

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<212> PRT

<213> Homo sapiens

<400> 248

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Leu Gly Ala Leu Ser Gly Trp Ala Ala Ser Asp Asp Pro Ile Glu 20 25 30

Lys Val Ile Glu Gly Ile Asn Arg Gly Leu Ser Asn Ala Glu Arg 35 40 45

Glu Val Gly Lys Ala Leu Asp Gly Ile Asn Ser Gly Ile Thr His
50 55 60

Ala Gly Arg Glu Val Glu Lys Val Phe Asn Gly Leu Ser Asn Met
65 70 75

Gly Ser His Thr Gly Lys Glu Leu Asp Lys Gly Val Gln Gly Leu 80 85 90

Asn His Gly Met Asp Lys Val Ala His Glu Ile Asn His Gly Ile 95 100 105

Gly Gln Ala Gly Lys Glu Ala Glu Lys Leu Gly His Gly Val Asn 110 115 120

Asn Ala Ala Gly Gln Ala Gly Lys Glu Ala Asp Lys Ala Val Gln 125 130 135

Gly Phe His Thr Gly Val His Gln Ala Gly Lys Glu Ala Glu Lys 140 145 150

Leu Gly Gln Gly Val Asn His Ala Ala Asp Gln Ala Gly Lys Glu 155 160 165

Val Glu Lys Leu Gly Gln Gly Ala His His Ala Ala Gly Gln Ala 170 175 180

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                                      190
 Lys Glu Ala Asn Gln Leu Leu Asn Gly Asn His Gln Ser Gly Ser
 Ser Ser His Gln Gly Gly Ala Thr Thr Pro Leu Ala Ser Gly
 Ala Ser Val Asn Thr Pro Phe Ile Asn Leu Pro Ala Leu Trp Arg
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 Ser Val Ala Asn Ile Met Pro
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Leu Leu Leu Leu Gln Pro Pro Pro Pro Thr Trp Ala Leu Ser 35 40 45

Pro Arg Ile Ser Leu Pro Leu Gly Ser Glu Glu Arg Pro Phe Leu
50 55 60

Arg Phe Glu Ala Glu His Ile Ser Asn Tyr Thr Ala Leu Leu Leu 65 70 75

Ser Arg Asp Gly Arg Thr Leu Tyr Val Gly Ala Arg Glu Ala Leu

				80					85					90
Phe	Ala	Leu	Ser	Ser 95	Asn	Leu	Ser	Phe	Leu 100	Pro	Gly	Gly	Glu	Tyr 105
Gln	Glu	Leu	Leu	Trp 110	Gly	Ala	Asp	Ala	Glu 115	Lys	Lys	Gln	Gln	Cys 120
Ser	Phe	Lys	Gly	Lys 125	Asp	Pro	Gln	Arg	Asp 130	Cys	Gln	Asn	Tyr	Ile 135
Lys	Ile	Leu	Leu	Pro 140	Leu	Ser	Gly	Ser	His 145	Leu	Phe	Thr	Суз	Gly 150
Thr	Ala	Ala	Phe	Ser 155	Pro	Met	Cys	Thr	Tyr 160	Ile	Asn	Met	Glu	Asn 165
Phe	Thr	Leu	Ala	Arg 170	Asp	Glu	Lys	Gly	Asn 175	Val	Leu	Leu	Glu	Asp 180
Gly	Lys	Gly	Arg	Cys 185	Pro	Phe	Asp	Pro	Asn 190	Phe	Lys	Ser	Thr	Ala 195
Leu	Val	Val	Asp	Gly 200	Glu	Leu	Tyr	Thr	Gly 205	Thr	Val	Ser	Ser	Phe 210
Gln	Gly	Asn	Asp	Pro 215	Ala	Ile	Ser	Arg	Ser 220	Gln	Ser	Leu	Arg	Pro 225
Thr	Lys	Thr	Glu	Ser 230	Ser	Leu	Asn	Trp	Leu 235	Gln	Asp	Pro	Ala	Phe 240
Val	Ala	Ser	Ala	Tyr 245	Ile	Pro	Glu	Ser	Leu 250	Gly	Ser	Leu	Gln	Gly 255
Asp	Asp	Asp	Lys	Ile 260	Tyr	Phe	Phe	Phe	Ser 265	Glu	Thr	Gly	Gln	Glu 270
Phe	Glu	Phe	Phe	Glu 275	Asn	Thr	Ile	Val	Ser 280	Arg	Ile	Ala	Arg	Ile 285
Cys	Lys	Gly	Asp	Glu 290	Gly	Gly	Glu	Arg	Val 295	Leu	Gln	Gln	Arg	Trp 300
Thr	Ser	Phe	Leu	Lys 305	Ala	Gln	Leu	Leu	Cys 310	Ser	Arg	Pro	Asp	Asp 315
Gly	Phe	Pro	Phe	Asn 320	Val	Leu	Gln	Asp	Val 325	Phe	Thr	Leu	Ser	Pro 330
Ser	Pro	Gln	Asp	Trp 335	Arg	Asp	Thr	Leu	Phe 340	Tyr	Gly	Val	Phe	Thr 345
Ser	Gln	Trp	His	Arg 350	Gly	Thr	Thr	Glu	Gly 355	Ser	Ala	Val	Cys	Val 360
Phe	Thr	Met	Lys	Asp	Val	Gln	Arg	Val	Phe	Ser	Gly	Leu	Tyr	Lys

Glu Val Asn Arg Glu Thr Gln Gln Trp Tyr Thr Val Thr His Pro 385 Val Pro Thr Pro Arg Pro Gly Ala Cys Ile Thr Asn Ser Ala Arg 395 400 Glu Arg Lys Ile Asn Ser Ser Leu Gln Leu Pro Asp Arg Val Leu Asn Phe Leu Lys Asp His Phe Leu Met Asp Gly Gln Val Arg Ser Arg Met Leu Leu Gln Pro Gln Ala Arg Tyr Gln Arg Val Ala Val His Arg Val Pro Gly Leu His His Thr Tyr Asp Val Leu Phe Leu Gly Thr Gly Asp Gly Arg Leu His Lys Ala Val Ser Val Gly Pro Arg Val His Ile Ile Glu Glu Leu Gln Ile Phe Ser Ser Gly Gln Pro Val Gln Asn Leu Leu Leu Asp Thr His Arg Gly Leu Leu Tyr Ala Ala Ser His Ser Gly Val Val Gln Val Pro Met Ala Asn Cys Ser Leu Tyr Arg Ser Cys Gly Asp Cys Leu Leu Ala Arg Asp Pro Tyr Cys Ala Trp Ser Gly Ser Ser Cys Lys His Val Ser Leu Tyr Gln Pro Gln Leu Ala Thr Arg Pro Trp Ile Gln Asp Ile Glu 570 Gly Ala Ser Ala Lys Asp Leu Cys Ser Ala Ser Ser Val Val Ser Pro Ser Phe Val Pro Thr Gly Glu Lys Pro Cys Glu Gln Val Gln Phe Gln Pro Asn Thr Val Asn Thr Leu Ala Cys Pro Leu Leu Ser Asn Leu Ala Thr Arg Leu Trp Leu Arg Asn Gly Ala Pro Val Asn 630 Ala Ser Ala Ser Cys His Val Leu Pro Thr Gly Asp Leu Leu Leu Val Gly Thr Gln Gln Leu Gly Glu Phe Gln Cys Trp Ser Leu Glu 660 Glu Gly Phe Gln Gln Leu Val Ala Ser Tyr Cys Pro Glu Val Val

				665					670					675
Glu	Asp	Gly	Val	Ala 680	Asp	Gln	Thr	Asp	Glu 685	Gly	Gly	Ser	Val	Pro 690
Val	Ile	Ile	Ser	Thr 695	Ser	Arg	Val	Ser	Ala 700	Pro	Ala	Gly	Gly	Lys 705
Ala	Ser	Trp	Gly	Ala 710	Asp	Arg	Ser	Tyr	Trp 715	Lys	Glu	Phe	Leu	Val 720
Met	Суз	Thr	Leu	Phe 725	Val	Leu	Ala	Val	Leu 730	Leu	Pro	Val	Leu	Phe 735
Leu	Leu	Tyr	Arg	His 740	Arg	Asn	Ser	Met	Lys 745	Val	Phe	Leu	Lys	Gln 750
Gly	Glu	Cys	Ala	Ser 755	Val	His	Pro	Lys	Thr 760	Cys	Pro	Val	Val	Leu 765
Pro	Pro	Glu	Thr	Arg 770	Pro	Leu	Asn	Gly	Leu 775	Gly	Pro	Pro	Ser	Thr 780
Pro	Leu	Asp	His	Arg 785	Gly	Tyr	Gln	Ser	Leu 790	Ser	Asp	Ser	Pro	Pro 795
Gly	Ala	Arg	Val	Phe 800	Thr	Glu	Ser	Glu	Lys 805	Arg	Pro	Leu	Ser	Ile 810
Gln	Asp	Ser	Phe	Val 815	Glu	Val	Ser	Pro	Val 820	Cys	Pro	Arg	Pro	Arg 825
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Glu Gly Cys Arg Ser Gly Gln Ala Ala Ala Ser Gln Ala Gly Gly
50 55 60

Ala Arg Gly Asp Ala Arg Gly Ala Gln Leu Trp Pro Pro Gly Ser
65 70 75

Asp Pro Asp Gly Gly Pro Arg Asp Arg Asn Phe Leu Phe Val Gly 80 85 90

Val Met Thr Ala Gln Lys Tyr Leu Gln Thr Arg Ala Val Ala Ala 95 100 , 105

Tyr Arg Thr Trp Ser Lys Thr Ile Pro Gly Lys Val Gln Phe Phe 110 115

Ser Ser Glu Gly Ser Asp Thr Ser Val Pro Ile Pro Val Val Pro 125 130 135

Leu Arg Gly Val Asp Asp Ser Tyr Pro Pro Gln Lys Lys Ser Phe 140 145 150

Met Met Leu Lys Tyr Met His Asp His Tyr Leu Asp Lys Tyr Glu 155 160 165

Trp Phe Met Arg Ala Asp Asp Asp Val Tyr Ile Lys Gly Asp Arg 170 175 180

Leu Glu Asn Phe Leu Arg Ser Leu Asn Ser Ser Glu Pro Leu Phe
185 190 195

Leu Gly Gln Thr Gly Leu Gly Thr Thr Glu Glu Met Gly Lys Leu
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Ala Leu Glu Pro Gly Glu Asn Phe Cys Met Gly Gly Pro Gly Val 215 220 225

Ile Met Ser Arg Glu Val Leu Arg Arg Met Val Pro His Ile Gly 230 235 240

Lys Cys Leu Arg Glu Met Tyr Thr Thr His Glu Asp Val Glu Val Gly Arg Cys Val Arg Arg Phe Ala Gly Val Gln Cys Val Trp Ser Tyr Glu Met Arg Gln Leu Phe Tyr Glu Asn Tyr Glu Gln Asn Lys Lys Gly Tyr Ile Arg Asp Leu His Asn Ser Lys Ile His Gln Ala Ile Thr Leu His Pro Asn Lys Asn Pro Pro Tyr Gln Tyr Arg Leu His Ser Tyr Met Leu Ser Arg Lys Ile Ser Glu Leu Arg His Arg Thr Ile Gln Leu His Arg Glu Ile Val Leu Met Ser Lys Tyr Ser Asn Thr Glu Ile His Lys Glu Asp Leu Gln Leu Gly Ile Pro Pro Ser Phe Met Arg Phe Gln Pro Arg Gln Arg Glu Glu Ile Leu Glu 375 Trp Glu Phe Leu Thr Gly Lys Tyr Leu Tyr Ser Ala Val Asp Gly Gln Pro Pro Arg Arg Gly Met Asp Ser Ala Gln Arg Glu Ala Leu Asp Asp Ile Val Met Gln Val Met Glu Met Ile Asn Ala Asn Ala Lys Thr Arg Gly Arg Ile Ile Asp Phe Lys Glu Ile Gln Tyr Gly 435 Tyr Arg Arg Val Asn Pro Met Tyr Gly Ala Glu Tyr Ile Leu Asp Leu Leu Leu Tyr Lys Lys His Lys Gly Lys Lys Met Thr Val 465 Pro Val Arg Arg His Ala Tyr Leu Gln Gln Thr Phe Ser Lys Ile Gln Phe Val Glu His Glu Glu Leu Asp Ala Gln Glu Leu Ala Lys 485 495 Arg Ile Asn Gln Glu Ser Gly Ser Leu Ser Phe Leu Ser Asn Ser Leu Lys Lys Leu Val Pro Phe Gln Leu Pro Gly Ser Lys Ser Glu 515 525

His Lys Glu Pro Lys Asp Lys Ile Asn Ile Leu Ile Pro Leu

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Lys	Thr	Cys	Leu	Ile 560	Pro	Asn	Gln	Asn	Val 565	Lys	Leu	Val	Val	Leu 570
Leu	Phe	Asn	Ser	Asp 575	Ser	Asn	Pro	Asp	Lys 580	Ala	Lys	Gln	Val	Glu 585
Leu	Met	Arg	Asp	Tyr 590	Arg	Ile	Lys	Tyr	Pro 595	Lys	Ala	Asp	Met	Gln 600
Ile	Leu	Pro	Val	Ser 605	Gly	Glu	Phe	Ser	Arg 610	Ala	Leu	Ala	Leu	Glu 615
Val	Gly	Ser	Ser	Gln 620	Phe	Asn	Asn	Glu	Ser 625	Leu	Leu	Phe	Phe	Cys 630
Asp	Val	Asp	Leu	Val 635	Phe	Thr	Thr	Glu	Phe 640	Leu	Gln	Arg	Cys	Arg 645
Ala	Asn	Thr	Val	Leu 650	Gly	Gln	Gln	Ile	Tyr 655	Phe	Pro	Ile	Ile	Phe 660
Ser	Gln	Tyr	Asp	Pro 665	Lys	Ile	Val	Tyr	Ser 670	Gly	Lys	Val	Pro	Ser 675
Asp	Asn	His	Phe	Ala 680	Phe	Thr	Gln	Lys	Thr 685	Gly	Phe	Trp	Arg	Asn 690
Tyr	Gly	Phe	Gly	Ile 695	Thr	Cys	Ile	Tyr	Lys 700	Gly	Asp	Leu	Val	Arg 705
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Arg	Ser	Gln	Glu	Val 740	Gly	Val	Val	His	Val 745	His	His	Pro	Val	Phe 750
Суз	Asp	Pro	Asn	Leu 755	Asp	Pro	Lys	Gln	Tyr 760	Lys	Met	Cys	Leu	Gly 765
Ser	Lys	Ala	Ser	Thr 770	Tyr	Gly	Ser	Thr	Gln 775	Gln	Leu	Ala	Glu	Met 780
Trp	Leu	Glu	Lys	Asn 785	Asp	Pro	Ser	Tyr	Ser 790	Lys	Ser	Ser	Asn	Asn 795
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<211> 350

<212> PRT

<213> Homo sapiens

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Ser Val Pro Ser Gly Glu Pro Gly Arg Glu Lys Lys Ser Asn Ser

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Thr	Asn	Pro	Ile	Ser 95	Glu	Glu	Thr	Thr	Thr 100	Phe	Pro	Thr	Gly	Gly 105
Phe	Thr	Pro	Glu	Ile 110	Gly	Lys	Lys	Lys	His 115	Thr	Glu	Ser	Thr	Pro 120
Phe	Trp	Ser	Ile	Lys 125	Pro	Asn	Asn	Val	Ser 130	Ile	Val	Leu	His	Ala 135
Glu	Glu	Pro	Tyr	Ile 140	Glu	Asn	Glu	Glu	Pro 145	Glu	Pro	Glu	Pro	Glu 150
Pro	Ala	Ala	Lys	Gln 155	Thr	Glu	Ala	Pro	Arg 160	Met	Leu	Pro	Val	Val 165
Thr	Glu	Ser	Ser	Thr 170	Ser	Pro	Tyr	Val	Thr 175	Ser	Tyr	Lys	Ser	Pro 180
Val	Thr	Thr	Leu	Asp 185	Lys	Ser	Thr	Gly	Ile 190	Glu	Ile	Ser	Thr	Glu 195
Ser	Glu	Asp	Val	Pro 200	Gln	Leu	Ser	Gly	Glu 205	Thr	Ala	Ile	Glu	Lys 210
Pro	Glu	Glu	Phe	Gly 215	Lys	His	Pro	Glu	Ser 220	Trp	Asn	Asn	Asp	Asp 225
Ile	Leu	Lys	Lys	Ile 230	Leu	Asp	Ile	Asn	Ser 235	Gln	Val	Gln	Gln	Ala 240
Leu	Leu	Ser	Asp	Thr 245	Ser	Asn	Pro	Ala	Tyr 250	Arg	Glu	Asp	Ile	Glu 255
Ala	Ser	Lys	Asp	His 260	Leu	Lys	Arg	Ser	Leu 265	Ala	Leu	Ala	Ala	Ala 270
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Val	Gly	Arg	Thr	Ser 290	Asn	Lys	Ile	Asp	Asp 295	Ile	Glu	Thr	Val	Ile 300
Asn	Met	Leu	Cys	Asn 305	Ser	Arg	Ser	Lys	Leu 310	Tyr	Glu	Tyr	Leu	Asp 315
Ile	Lys	Cys	Val	Pro 320	Pro	Glu	Met	Arg	Glu 325	Lys	Ala	Ala	Thr	Val 330
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Leu Leu Lys Val Tyr 350

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<212> DNA

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<212> PRT

<400> 267

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Thr	Ser	Ala	Glu	Ala 50	Met	Glu	Val	Arg	Phe 55	Phe	Arg	Asn	Gln	Phe 60
His	Ala	Val	Val	His 65	Leu	Tyr	Arg	Asp	Gly 70	Glu	Asp	Trp	Glu	Ser 75
Lys	Gln	Met	Pro	Gln 80	Tyr	Arg	Gly	Arg	Thr 85	Glu	Phe	Val	Lys	Asp 90
Ser	Ile	Ala	Gly	Gly 95	Arg	Val	Ser	Leu	Arg 100	Leu	Lys	Asn	Ile	Thr 105
Pro	Ser	Asp	Ile	Gly 110	Leu	Tyr	Gly	Cys	Trp 115	Phe	Ser	Ser	Gln	Ile 120
Tyr	Asp	Glu	Glu	Ala 125	Thr	Trp	Glu	Leu	Arg 130	Val	Ala	Ala	Leu	Gly 135
Ser	Leu	Pro	Leu	Ile 140	Ser	Ile	Val	Gly	Tyr 145	Val	Asp	Gly	Gly	Ile 150
Gln	Leu	Leu	Суѕ	Leu 155	Ser	Ser	Gly	Trp	Phe 160	Pro	Gln	Pro	Thr	Ala 165
Lys	Trp	Lys	Gly	Pro 170	Gln	Gly	Gln	Asp	Leu 175	Ser	Ser	Asp	Ser	Arg 180
Ala	Asn	Ala	Asp	Gly 185	Tyr	Ser	Leu	Tyr	Asp 190	Val	Glu	Ile	Ser	Ile 195
Ile	Val	Gln	Glu	Asn 200	Ala	Gly	Ser	Ile	Leu 205	Cys	Ser	Ile	His	Leu 210
Ala	Glu	Gln	Ser	His 215	Glu	Val	Glu	Ser	Lys 220	Val	Leu	Ile	Gly	Glu 225
Thr	Phe	Phe	Gln	Pro 230	Ser	Pro	Trp	Arg	Leu 235	Ala	Ser	Ile	Leu	Leu 240
Gly	Leu	Leu	Cys	Gly 245	Ala	Leu	Cys	Gly	Val 250	Val	Met	Gly	Met	Ile 255
Ile	Val	Phe	Phe	Lys 260	Ser	Lys	Gly	Lys	Ile 265	Gln	Ala	Glu	Leu	Asp 270

Trp Arg Arg Lys His Gly Gln Ala Glu Leu Arg Asp Ala Arg Lys

His Ala Val Glu Val Thr Leu Asp Pro Glu Thr Ala His Pro Lys

Leu Cys Val Ser Asp Leu Lys Thr Val Thr His Arg Lys Ala Pro

275

305

254

310

315

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Gln Glu Val Pro His Ser Glu Lys Arg Phe Thr Arg Lys Ser Val
Val Ala Ser Gln Gly Phe Gln Ala Gly Arg His Tyr Trp Glu Val
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                                     340
Asp Val Gly Gln Asn Val Gly Trp Tyr Val Gly Val Cys Arg Asp
Asp Val Asp Arg Gly Lys Asn Asn Val Thr Leu Ser Pro Asn Asn
Gly Tyr Trp Val Leu Arg Leu Thr Thr Glu His Leu Tyr Phe Thr
                                     385
                                                         390
Phe Asn Pro His Phe Ile Ser Leu Pro Pro Ser Thr Pro Pro Thr
                                     400
                                                         405
Arg Val Gly Val Phe Leu Asp Tyr Glu Gly Gly Thr Ile Ser Phe
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                                     415
                                                         420
Phe Asn Thr Asn Asp Gln Ser Leu Ile Tyr Thr Leu Leu Thr Cys
                425
                                     430
                                                         435
Gln Phe Glu Gly Leu Leu Arg Pro Tyr Ile Gln His Ala Met Tyr
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Asp Glu Glu Lys Gly Thr Pro Ile Phe Ile Cys Pro Val Ser Trp
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<210> 268

<211> 2103

<212> DNA

<213> Homo sapiens

<400> 268

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ctcactcagt taaaattaaa aaaatcaaca agacagaaac agacagctat 550 ctaaaccatt gctgcggaac acgaagaagt aaaactctag gtcagagtct 600 caggatcgtt ggtgggacag aagtagaaga gggtgaatgg ccctggcagg 650 ctagcctgca gtgggatggg agtcatcgct gtggagcaac cttaattaat 700 gccacatggc ttgtgagtgc tgctcactgt tttacaacat ataagaaccc 750 tgccagatgg actgcttcct ttggagtaac aataaaacct tcgaaaatga 800 aacggggtct ccggagaata attgtccatg aaaaatacaa acacccatca 850 catgactatg atattctct tgcagagctt tctagccctg ttccctacac 900 aaatgcagta catagagttt gtctccctga tgcatcctat gagtttcaac 950 caggtgatgt gatgtttgtg acaggatttg gagcactgaa aaatgatggt 1000 tacagtcaaa atcatcttcg acaagcacag gtgactctca tagacqctac 1050 aacttgcaat gaacctcaag cttacaatga cgccataact cctagaatgt 1100 tatgtgctgg ctccttagaa ggaaaaacag atgcatgcca gggtgactct 1150 ggaggaccac tggttagttc agatgctaga gatatctggt accttgctgg 1200 aatagtgagc tggggagatg aatgtgcgaa acccaacaag cctggtgttt 1250 atactagagt tacggccttg cgggactgga ttacttcaaa aactggtatc 1300 taagagacaa aagcctcatg gaacagataa cattttttt tgttttttgg 1350 gtgtggaggc catttttaga gatacagaat tggagaagac ttgcaaaaca 1400 gctagatttg actgatctca ataaactgtt tgcttgatgc atgtattttc 1450 ttcccagctc tgttccgcac gtaagcatcc tgcttctgcc agatcaactc 1500 tgtcatctgt gagcaatagt tgaaacttta tgtacataga gaaatagata 1550 atacaatatt acattacagc ctgtattcat ttgttctcta gaagttttgt 1600 cagaattttg acttgttgac ataaatttgt aatgcatata tacaatttga 1650 agcactcctt ttcttcagtt cctcagctcc tctcatttca gcaaatatcc 1700 attttcaagg tgcagaacaa ggagtgaaag aaaatataag aagaaaaaaa 1750 tcccctacat tttattggca cagaaaagta ttaggtgttt ttcttagtgg 1800 aatattagaa atgatcatat tcattatgaa aggtcaagca aagacagcag 1850 aataccaatc acttcatcat ttaggaagta tgggaactaa gttaaggaag 1900 tccagaaaga agccaagata tatccttatt ttcatttcca aacaactact 1950

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<210> 269

<211> 423

<212> PRT

<213> Homo sapiens

<400> 269

Met Met Tyr Arg Pro Asp Val Val Arg Ala Arg Lys Arg Val Cys
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Trp Glu Pro Trp Val Ile Gly Leu Val Ile Phe Ile Ser Leu Ile 20 25 30

Val Leu Ala Val Cys Ile Gly Leu Thr Val His Tyr Val Arg Tyr 35 40 45

Asn Gln Lys Lys Thr Tyr Asn Tyr Tyr Ser Thr Leu Ser Phe Thr 50 55 60

Thr Asp Lys Leu Tyr Ala Glu Phe Gly Arg Glu Ala Ser Asn Asn 65 70 75

Phe Thr Glu Met Ser Gln Arg Leu Glu Ser Met Val Lys Asn Ala 80 85 90

Phe Tyr Lys Ser Pro Leu Arg Glu Glu Phe Val Lys Ser Gln Val 95 100 105

Ile Lys Phe Ser Gln Gln Lys His Gly Val Leu Ala His Met Leu 110 115 120

Leu Ile Cys Arg Phe His Ser Thr Glu Asp Pro Glu Thr Val Asp 125 130 135

Lys Ile Val Gln Leu Val Leu His Glu Lys Leu Gln Asp Ala Val

Gly Pro Pro Lys Val Asp Pro His Ser Val Lys Ile Lys Lys Ile 155 160 165

Asn Lys Thr Glu Thr Asp Ser Tyr Leu Asn His Cys Cys Gly Thr 170 175 180

Arg Arg Ser Lys Thr Leu Gly Gln Ser Leu Arg Ile Val Gly Gly 185

Thr Glu Val Glu Glu Gly Glu Trp Pro Trp Gln Ala Ser Leu Gln 200 205 210

Trp Asp Gly Ser His Arg Cys Gly Ala Thr Leu Ile Asn Ala Thr 215 220 225

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Trp Leu Val Ser Ala Ala His Cys Phe Thr Thr Tyr Lys Asn Pro
Ala Arg Trp Thr Ala Ser Phe Gly Val Thr Ile Lys Pro Ser Lys
                                                         255
Met Lys Arg Gly Leu Arg Arg Ile Ile Val His Glu Lys Tyr Lys
His Pro Ser His Asp Tyr Asp Ile Ser Leu Ala Glu Leu Ser Ser
Pro Val Pro Tyr Thr Asn Ala Val His Arg Val Cys Leu Pro Asp
                                                         300
Ala Ser Tyr Glu Phe Gln Pro Gly Asp Val Met Phe Val Thr Gly
                                     310
                                                         315
Phe Gly Ala Leu Lys Asn Asp Gly Tyr Ser Gln Asn His Leu Arg
Gln Ala Gln Val Thr Leu Ile Asp Ala Thr Thr Cys Asn Glu Pro
                                     340
Gln Ala Tyr Asn Asp Ala Ile Thr Pro Arg Met Leu Cys Ala Gly
                                     355
                                                         360
Ser Leu Glu Gly Lys Thr Asp Ala Cys Gln Gly Asp Ser Gly Gly
                                     370
                                                         375
Pro Leu Val Ser Ser Asp Ala Arg Asp Ile Trp Tyr Leu Ala Gly
                                     385
                                                         390
Ile Val Ser Trp Gly Asp Glu Cys Ala Lys Pro Asn Lys Pro Gly
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Val Tyr Thr Arg Val Thr Ala Leu Arg Asp Trp Ile Thr Ser Lys
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Thr Gly Ile

<210> 270

<211> 1170

<212> DNA

<213> Homo sapiens

<400> 270

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cagacgtcag ctggtggatt cccgctgcat caaggcctac ccactgtctc 150
catgctgggc tctccctgcc ttctgtggct cctggccgtg accttcttgg 200
ttcccagagc tcagcccttg gcccctcaag actttgaaga agaggaggca 250

gatgagactg agacggcgtg gccgcctttg ccggctgtcc cctgcgacta 300 cgaccactgc cgacacctgc aggtgccctg caaggagcta cagagggtcq 350 ggccggcggc ctgcctgtgc ccaggactct ccagccccqc ccagccqccc 400 gacccgccgc gcatgggaga agtgcgcatt gcggccgaag agggccgcgc 450 agtggtccac tggtgtgccc ccttctcccc ggtcctccac tactggctgc 500 tgctttggga cggcagcgag gctgcgcaga aggggccccc gctgaacgct 550 acggtccgca gagccgaact gaaggggctg aagccagggg gcatttatgt 600 cgtttgcgta gtggccgcta acgaggccgg ggcaagccqc gtgccccagg 650 ctggaggaga gggcctcgag ggggccgaca tccctgcctt cgggccttgc 700 agccgccttg cggtgccgcc caacccccgc actctggtcc acqcgqccgt 750 cggggtgggc acggccctgg ccctgctaag ctgtgccgcc ctggtqtgqc 800 acttetgeet gegegatege tggggetgee egegeegage egeegeega 850 gccgcagggg cgctctgaaa ggggcctggg ggcatctcgg gcacagacag 900 ccccacctgg ggcgctcagc ctggcccccg ggaaagagga aaacccgctg 950 cctccaggga gggctggacg gcgagctggg agccagcccc aggctccagg 1000 gccacggcgg agtcatggtt ctcaggactg agcgcttgtt taggtccggt 1050 acttggcgct ttgtttcctg gctgaggtct gggaaggaat agaaaggggc 1100 ccccaatttt tttttaagcg gccagataat aaataatgta acctttgcgg 1150 ttaaaaaaaa aaaaaaaaa 1170

<210> 271

<211> 238

<212> PRT

<213> Homo sapiens

<400> 271

Met Leu Gly Ser Pro Cys Leu Leu Trp Leu Leu Ala Val Thr Phe 1 5 10 15

Leu Val Pro Arg Ala Gln Pro Leu Ala Pro Gln Asp Phe Glu Glu 20 25 30

Glu Glu Ala Asp Glu Thr Glu Thr Ala Trp Pro Pro Leu Pro Ala 35 40 45

Val Pro Cys Asp Tyr Asp His Cys Arg His Leu Gln Val Pro Cys 50 55 60

Lys Glu Leu Gln Arg Val Gly Pro Ala Ala Cys Leu Cys Pro Gly
65 70 75

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Leu Ser Ser Pro Ala Gln Pro Pro Asp Pro Pro Arg Met Gly Glu
Val Arg Ile Ala Ala Glu Glu Gly Arg Ala Val Val His Trp Cys
                                    100
                                                        105
Ala Pro Phe Ser Pro Val Leu His Tyr Trp Leu Leu Trp Asp
Gly Ser Glu Ala Ala Gln Lys Gly Pro Pro Leu Asn Ala Thr Val
Arg Arg Ala Glu Leu Lys Gly Leu Lys Pro Gly Gly Ile Tyr Val
Val Cys Val Val Ala Ala Asn Glu Ala Gly Ala Ser Arg Val Pro
Gln Ala Gly Glu Gly Leu Glu Gly Ala Asp Ile Pro Ala Phe
                                                        180
Gly Pro Cys Ser Arg Leu Ala Val Pro Pro Asn Pro Arg Thr Leu
                                    190
Val His Ala Ala Val Gly Val Gly Thr Ala Leu Ala Leu Leu Ser
                                                        210
Cys Ala Ala Leu Val Trp His Phe Cys Leu Arg Asp Arg Trp Gly
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Cys Pro Arg Arg Ala Ala Ala Arg Ala Ala Gly Ala Leu
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<210> 272 <211> 2397

<212> DNA

<213> Homo sapiens

<400> 272

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aagtttgctt gtcattttct gtgtagaact ggcttgtggc gtttggacat 550 atgaacagga acttatggtt ccagtacaat ggtcagatat ggtcactttg 600 aaagccagga tgacaaatta tggattacct agatatcggt ggcttactca 650 tgcttggaat tttttcaga gagagtttaa gtgctgtgga gtagtatatt 700 tcactgactg gttggaaatg acagagatgg actggccccc agattcctgc 750 tgtgttagag aattcccagg atgttccaaa caggcccacc aggaagatct 800 cagtgacctt tatcaagagg gttgtgggaa gaaaatgtat tcctttttga 850 gaggaaccaa acaactgcag gtgctgaggt ttctgggaat ctccattggg 900 gtgacacaaa teetggeeat gatteteace attactetge tetgggetet 950 gtattatgat agaagggagc ctgggacaga ccaaatgatg tccttgaaga 1000 atgacaactc tcagcacctg tcatgtccct cagtagaact gttgaaacca 1050 agcctgtcaa gaatctttga acacacatcc atggcaaaca gctttaatac 1100 acactttgag atggaggagt tataaaaaga aatgtcacag aagaaaacca 1150 caaacttgtt ttattggact tgtgaatttt tgagtacata ctatgtgttt 1200 cagaaatatg tagaaataaa aatgttgcca taaaataaca cctaagcata 1250 tactattcta tgctttaaaa tgaggatgga aaagtttcat gtcataagtc 1300 accacctgga caataattga tgcccttaaa atgctgaaga cagatgtcat 1350 acceaetgtg tageetgtgt atgaetttta etgaacaeag ttatgttttg 1400 aggcagcatg gtttgattag catttccgca tccatgcaaa cgagtcacat 1450 atggtgggac tggagccata gtaaaggttg atttacttct accaactagt 1500 atataaagta ctaattaaat gctaacatag gaagttagaa aatactaata 1550 acttttatta ctcagcgatc tattcttctg atgctaaata aattatatat 1600 cagaaaactt tcaatattgg tgactaccta aatgtgattt ttgctggtta 1650 ctaaaaatatt cttaccactt aaaagagcaa gctaacacat tgtcttaagc 1700 tgatcaggga ttttttgtat ataagtctgt gttaaatctg tataattcag 1750 tcgatttcag ttctgataat gttaagaata accattatga aaaggaaaat 1800 ttgtcctgta tagcatcatt atttttagcc tttcctgtta ataaagcttt 1850 actattctgt cctgggctta tattacacat ataactgtta tttaaatact 1900 taaccactaa ttttgaaaat taccagtgtg atacatagga atcattattc 1950

agaatgtagt ctggtcttta ggaagtatta ataagaaaat ttgcacataa 2000 cttagttgat tcagaaagga cttgtatgct gttttctcc caaatgaaga 2050 ctctttttga cactaaacac tttttaaaaa gcttatcttt gccttctcca 2100 aacaagaagc aatagtctcc aagtcaatat aaattctaca gaaaatagtg 2150 ttcttttct ccagaaaaat gcttgtgaga atcattaaaa catgtgacaa 2200 tttagagat ctttgttta tttcactgat taatatactg tggcaaatta 2250 cacagattat taaattttt tacaagagta tagtatattt atttgaaatg 2300 ggaaaagtgc atttactgt atttgtgta ttttgtttat ttccagaat 2350 atggaaagaa aattaaaatg tgtcaataaa tattttctag agagtaa 2397

<210> 273

<211> 305

<212> PRT

<213> Homo sapiens

<400> 273

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Ala Leu Asn Leu Leu Phe Trp Leu Met Ser Ile Ser Val Leu Ala 20 25 30

Val Ser Ala Trp Met Arg Asp Tyr Leu Asn Asn Val Leu Thr Leu
35 40 45

Thr Ala Glu Thr Arg Val Glu Glu Ala Val Ile Leu Thr Tyr Phe 50 55 60

Pro Val Val His Pro Val Met Ile Ala Val Cys Cys Phe Leu Ile

Ile Val Gly Met Leu Gly Tyr Cys Gly Thr Val Lys Arg Asn Leu 80 85 90

Leu Leu Leu Ala Trp Tyr Phe Gly Ser Leu Leu Val Ile Phe Cys 95 100 105

Val Glu Leu Ala Cys Gly Val Trp Thr Tyr Glu Gln Glu Leu Met
110 120

Val Pro Val Gln Trp Ser Asp Met Val Thr Leu Lys Ala Arg Met 125 130 135

Thr Asn Tyr Gly Leu Pro Arg Tyr Arg Trp Leu Thr His Ala Trp
140 145 150

Asn Phe Phe Gln Arg Glu Phe Lys Cys Cys Gly Val Val Tyr Phe 155 160 165

Thr Asp Trp Leu Glu Met Thr Glu Met Asp Trp Pro Pro Asp Ser

				170					175		•			180
Cys	Cys	Val	Arg	Glu 185	Phe	Pro	Gly	Суз	Ser 190	Lys	Gln	Ala	His	Gln 195
Glu	Asp	Leu	Ser	Asp 200	Leu	Tyr	Gln	Glu	Gly 205	Cys	Gly	Lys	Lys	Met 210
Tyr	Ser	Phe	Leu	Arg 215	Gly	Thr	Lys	Gln	Leu 220	Gln	Val	Leu	Arg	Phe 225
Leu	Gly	Ile	Ser	Ile 230	Gly	Val	Thr	Gln	Ile 235	Leu	Ala	Met	Ile	Leu 240
Thr	Ile	Thr	Leu	Leu 245	Trp	Ala	Leu	Tyr	Tyr 250	Asp	Arg	Arg	Glu	Pro 255
Gly	Thr	Asp	Gln	Met 260	Met	Ser	Leu	Lys	Asn 265	Asp	Asn	Ser	Gln	His 270
Leu	Ser	Cys	Pro	Ser 275	Val	Glu	Leu	Leu	Lys 280	Pro	Ser	Leu	Ser	Arg 285
Ile	Phe	Glu	His	Thr 290	Ser	Met	Ala	Asn	Ser 295	Phe	Asn	Thr	His	Phe 300
Glu	Met	Glu	Glu	Leu 305										
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<210> 275

<211> 432

<212> PRT

<213> Homo sapiens

<400> 275

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Val Lys Pro Leu Arg Lys Pro Arg Ile Pro Met Glu Thr Phe Arg 20 25 30

Lys Val Gly Ile Pro Ile Ile Ile Ala Leu Leu Ser Leu Ala Ser
35 40 45

Ile Ile Ile Val Val Leu Ile Lys Val Ile Leu Asp Lys Tyr
50 55 60

Tyr Phe Leu Cys Gly Gln Pro Leu His Phe Ile Pro Arg Lys Gln
65 70 75

Leu Cys Asp Gly Glu Leu Asp Cys Pro Leu Gly Glu Asp Glu Glu
80 85 90

His Cys Val Lys Ser Phe Pro Glu Gly Pro Ala Val Ala Val Arg 95 100 105

Leu Ser Lys Asp Arg Ser Thr Leu Gln Val Leu Asp Ser Ala Thr 110 115 120

Gly Asn Trp Phe Ser Ala Cys Phe Asp Asn Phe Thr Glu Ala Leu 125 130 135

Ala Glu Thr Ala Cys Arg Gln Met Gly Tyr Ser Arg Ala Val Glu 140 145 150

Ile Gly Pro Asp Gln Asp Leu Asp Val Val Glu Ile Thr Glu Asn 155 160 165

Ser Gln Glu Leu Arg Met Arg Asn Ser Ser Gly Pro Cys Leu Ser 170 175 180

Gly Ser Leu Val Ser Leu His Cys Leu Ala Cys Gly Lys Ser Leu 185 190 195

Lys Thr Pro Arg Val Val Gly Gly Glu Glu Ala Ser Val Asp Ser

Trp Pro Trp Gln Val Ser Ile Gln Tyr Asp Lys Gln His Val Cys 215 220 225

Gly Gly Ser Ile Leu Asp Pro His Trp Val Leu Thr Ala Ala His
230 235

Cys Phe Arg Lys His Thr Asp Val Phe Asn Trp Lys Val Arg Ala 245 250 255

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Gly Ser Asp Lys Leu Gly Ser Phe Pro Ser Leu Ala Val Ala Lys
                 260
Ile Ile Ile Glu Phe Asn Pro Met Tyr Pro Lys Asp Asn Asp
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Ile Ala Leu Met Lys Leu Gln Phe Pro Leu Thr Phe Ser Gly Thr
                                     295
Val Arg Pro Ile Cys Leu Pro Phe Phe Asp Glu Glu Leu Thr Pro
                305
Ala Thr Pro Leu Trp Ile Ile Gly Trp Gly Phe Thr Lys Gln Asn
Gly Gly Lys Met Ser Asp Ile Leu Leu Gln Ala Ser Val Gln Val
                                     340
                                                         345
Ile Asp Ser Thr Arg Cys Asn Ala Asp Asp Ala Tyr Gln Gly Glu
                                     355
                                                         360
Val Thr Glu Lys Met Met Cys Ala Gly Ile Pro Glu Gly Gly Val
                                                         375
Asp Thr Cys Gln Gly Asp Ser Gly Gly Pro Leu Met Tyr Gln Ser
                                                         390
Asp Gln Trp His Val Val Gly Ile Val Ser Trp Gly Tyr Gly Cys
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Gly Gly Pro Ser Thr Pro Gly Val Tyr Thr Lys Val Ser Ala Tyr
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Leu Asn Trp Ile Tyr Asn Val Trp Lys Ala Glu Leu
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<210> 276

<211> 3143

<212> DNA

<213> Homo sapiens

<400> 276

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<211> 761

<212> PRT

<213> Homo sapiens

<400> 277

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Thr	Ala	Pro	His	Ile 320	Tyr	Ala	Val	Phe	Thr 325	Ser	Gln	Trp	Gln	Val 330
Gly	Gly	Thr	Arg	Ser 335	Ser	Ala	Val	Cys	Ala 340	Phe	Ser	Leu	Leu	Asp 345
Ile	Glu	Arg	Val	Phe 350	Lys	Gly	Lys	Туг	Lys 355	Glu	Leu	Asn	Lys	Glu 360
Thr	Ser	Arg	Trp	Thr 365	Thr	Tyr	Arg	Gly	Pro 370	Glu	Thr	Asn	Pro	Arg 375
Pro	Gly	Ser	Cys	Ser 380	Val	Gly	Pro	Ser	Ser 385	Asp	Lys	Ala	Leu	Thr 390
Phe	Met	Lys	Asp	His 395	Phe	Leu	Met	Asp	Glu 400	Gln	Val	Val	Gly	Thr 405
Pro	Leu	Leu	Val	Lys 410	Ser	Gly	Val	Glu	Tyr 415	Thr	Arg	Leu	Ala	Val 420
Glu	Thr	Ala	Gln	Gly 425	Leu	Asp	Gly	His	Ser 430	His	Leu	Val	Met	Tyr 435
Leu	Gly	Thr	Thr	Thr 440	Gly	Ser	Leu	His	Lys 445	Ala	Val	Val	Ser	Gly 450
Asp	Ser	Ser	Ala	His 455	Leu	Val	Glu	Glu	Ile 460	Gln	Leu	Phe	Pro	Asp 465
Pro	Glu	Pro	Val	Arg 470	Asn	Leu	Gln	Leu	Ala 475	Pro	Thr	Gln	Gly	Ala 480
Val	Phe	Val	Gly	Phe 485	Ser	Gly	Gly	Val	Trp 490	Arg	Val	Pro	Arg	Ala 495
Asn	Cys	Ser	Val	Tyr 500	Glu	Ser	Cys	Val	Asp 505	Cys	Val	Leu	Ala	Arg 510
Asp	Pro	His	Cys	Ala 515	Trp	Asp	Pro	Glu	Ser 520	Arg	Thr	Cys	Cys	Leu 525
Leu	Ser	Ala	Pro	Asn 530	Leu	Asn	Ser	Trp	Lys 535	Gln	Asp	Met	Glu	Arg 540
Gly	Asn	Pro	Glu	Trp 545	Ala	Cys	Ala	Ser	Gly 550	Pro	Met	Ser	Arg	Ser 555
Leu	Arg	Pro	Gln	Ser 560	Arg	Pro	Gln	Ile	Ile 565	Lys	Glu	Val	Leu	Ala 570
Val	Pro	Asn	Ser	Ile 575	Leu	Glu	Leu	Pro	Cys 580	Pro	His	Leu	Ser	Ala 585

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Asp Gly Val Gly Gly Leu Tyr Gln Cys Trp Ala Thr Glu Asn Gly
Phe Ser Tyr Pro Val Ile Ser Tyr Trp Val Asp Ser Gln Asp Gln
Thr Leu Ala Leu Asp Pro Glu Leu Ala Gly Ile Pro Arg Glu His
Val Lys Val Pro Leu Thr Arg Val Ser Gly Gly Ala Ala Leu Ala
Ala Gln Gln Ser Tyr Trp Pro His Phe Val Thr Val Thr Val Leu
Phe Ala Leu Val Leu Ser Gly Ala Leu Ile Ile Leu Val Ala Ser
Pro Leu Arg Ala Leu Arg Ala Arg Gly Lys Val Gln Gly Cys Glu
Thr Leu Arg Pro Gly Glu Lys Ala Pro Leu Ser Arg Glu Gln His
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<211> 523
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<213> Homo sapiens
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Val Gly Gly Ser His Tyr Leu Leu Met Asp Arg Val Ser Gln Ile
 Leu Gln Asp His Gly His Asn Val Thr Met Leu Asn His Lys Arg
 Gly Pro Phe Met Pro Asp Phe Lys Lys Glu Glu Lys Ser Tyr Gln
 Val Ile Ser Trp Leu Ala Pro Glu Asp His Gln Arg Glu Phe Lys
 Lys Ser Phe Asp Phe Phe Leu Glu Glu Thr Leu Gly Gly Arg Gly
 Lys Phe Glu Asn Leu Leu Asn Val Leu Glu Tyr Leu Ala Leu Gln
 Cys Ser His Phe Leu Asn Arg Lys Asp Ile Met Asp Ser Leu Lys
                 125
                                     130
 Asn Glu Asn Phe Asp Met Val Ile Val Glu Thr Phe Asp Tyr Cys
 Pro Phe Leu Ile Ala Glu Lys Leu Gly Lys Pro Phe Val Ala Ile
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 Leu Ser Thr Ser Phe Gly Ser Leu Glu Phe Gly Leu Pro Ile Pro
 Leu Ser Tyr Val Pro Val Phe Arg Ser Leu Leu Thr Asp His Met
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 Asp Phe Trp Gly Arg Val Lys Asn Phe Leu Met Phe Phe Ser Phe
 Cys Arg Arg Gln Gln His Met Gln Ser Thr Phe Asp Asn Thr Ile
 Lys Glu His Phe Thr Glu Gly Ser Arg Pro Val Leu Ser His Leu
 Leu Leu Lys Ala Glu Leu Trp Phe Ile Asn Ser Asp Phe Ala Phe
 Asp Phe Ala Arg Pro Leu Leu Pro Asn Thr Val Tyr Val Gly Gly
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Leu Met Glu	Lys Pro 275	Lys	Pro	Val	Pro 280	Gln	Asp	Leu	Glu	Asn 285
Phe Ile Ala	Lys Phe 290	Asp	Ser	Gly	Phe 295	Val	Leu	Val	Thr	Leu 300
Gly Ser Met	Val Asn 305	Cys	Gln	Asn	Pro 310	Glu	Ile	Phe	Lys	Glu 315
Met Asn Asn	Ala Phe 320	His	Leu	Pro	Gln 325	Gly	Val	Ile	Trp	Lys 330
Cys Gln Cys	Ser His	Pro	Lys	Asp	Val 340	His	Leu	Ala	Ala	Asn 345
Val Lys Ile	Val Asp 350	Leu	Pro	Gln	Ser 355	Asp	Leu	Leu	Ala	His 360
Pro Ser Ile	Arg Leu 365	Val	Thr	His	Gly 370	Gly	Gln	Asn	Ser	Ile 375
Met Glu Ala	Ile Gln 380	Gly	Val	Pro	Met 385	Val	Gly	Ile	Pro	Leu 390
Phe Gly Asp	Gln Pro 395	Asn	Met	Val	Arg 400	Val	Glu	Ala	Lys	Lys 405
Phe Gly Val	Ser Ile 410	Leu	Lys	Lys	Leu 415	Lys	Ala	Glu	Thr	Leu 420
Ala Leu Lys	Met Lys 425	Ile	Met	Glu	Asp 430	Lys	Arg	Tyr	Lys	Ser 435
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Pro Thr Glr	Arg Leu 455	Gly	Trp	Ile	Asp 460	His	Val	Leu	Gln	Thr 465
Gly Gly Ala	Thr His	Lys	Pro	Tyr	Val 475	Phe	Gln	Gln	Pro	Trp 480
His Glu Glr	Tyr Leu 485	Asp	Val	Phe	Val 490	Phe	Leu	Leu	Gly	Leu 495
Thr Leu Gly	Thr Leu 500	Leu	Cys	Gly	Lys 505	Leu	Leu	Gly	Met	Ala 510
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<212> PRT

<213> Homo sapiens

<400> 287

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Trp Ala Gln Glu Gly Ser Glu Pro Val Leu Leu Glu Gly Glu Cys 35 40 45

Leu Val Val Cys Glu Pro Gly Arg Ala Ala Ala Gly Gly Pro Gly 50 55 60

Gly Ala Ala Leu Gly Glu Ala Pro Pro Gly Arg Val Ala Phe Ala 65 70 75

Gly Thr Ser Gly Ala Ile Tyr Phe Asp Gln Val Leu Val Asn Glu 95 100 105

Gly Gly Gly Phe Asp Arg Ala Ser Gly Ser Phe Val Ala Pro Val 110 115 120

Arg Gly Val Tyr Ser Phe Arg Phe His Val Val Lys Val Tyr Asn 125 130 135

Arg Gln Thr Val Gln Val Ser Leu Met Leu Asn Thr Trp Pro Val

Ile Ser Ala Phe Ala Asn Asp Pro Asp Val Thr Arg Glu Ala Ala 155 160 165

Thr Ser Ser Val Leu Leu Pro Leu Asp Pro Gly Asp Arg Val Ser

175 180 170 Leu Arg Leu Arg Arg Gly Asn Leu Leu Gly Gly Trp Lys Tyr Ser 185 Ser Phe Ser Gly Phe Leu Ile Phe Pro Leu 200 <210> 288 <211> 24 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-24 <223> Synthetic construct. <400> 288 aggcagccac cagctctgtg ctac 24 <210> 289 <211> 27 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-27 <223> Synthetic construct. <400> 289 cagagagga agatgaggaa gccagag 27 <210> 290 <211> 42 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-42 <223> Synthetic construct. <400> 290 ctgtgctact gcccttggac cctggggacc gagtgtctct gc 42 <210> 291 <211> 1570 <212> DNA <213> Homo sapiens <400> 291 gctgtttctc tcgcgccacc actggccgcc ggccgcagct ccaggtgtcc 50

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<210> 292

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<211> 388
<212> PRT
<213> Homo sapiens
<400> 292
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Arg Gln Ala Glu Ala Asp Arg Ser Gln Arg Ser His Gly Gly Pro
Ala Leu Ser Arg Glu Gly Ser Gly Arg Trp Gly Thr Gly Ser Ser
 Ile Leu Ser Ala Leu Gln Asp Leu Phe Ser Val Thr Trp Leu Asn
Arg Ser Lys Val Glu Lys Gln Leu Gln Val Ile Ser Val Leu Gln
 Trp Val Leu Ser Phe Leu Val Leu Gly Val Ala Cys Ser Ala Ile
 Leu Met Tyr Ile Phe Cys Thr Asp Cys Trp Leu Ile Ala Val Leu
 Tyr Phe Thr Trp Leu Val Phe Asp Trp Asn Thr Pro Lys Lys Gly
 Gly Arg Arg Ser Gln Trp Val Arg Asn Trp Ala Val Trp Arg Tyr
 Phe Arg Asp Tyr Phe Pro Ile Gln Leu Val Lys Thr His Asn Leu
 Leu Thr Thr Arg Asn Tyr Ile Phe Gly Tyr His Pro His Gly Ile
                 155
Met Gly Leu Gly Ala Phe Cys Asn Phe Ser Thr Glu Ala Thr Glu
 Val Ser Lys Lys Phe Pro Gly Ile Arg Pro Tyr Leu Ala Thr Leu
Ala Gly Asn Phe Arg Met Pro Val Leu Arg Glu Tyr Leu Met Ser
 Gly Gly Ile Cys Pro Val Ser Arg Asp Thr Ile Asp Tyr Leu Leu
                 215
 Ser Lys Asn Gly Ser Gly Asn Ala Ile Ile Ile Val Val Gly Gly
Ala Ala Glu Ser Leu Ser Ser Met Pro Gly Lys Asn Ala Val Thr
                 245
Leu Arg Asn Arg Lys Gly Phe Val Lys Leu Ala Leu Arg His Gly
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	260		265	270							
Ala Asp Leu Val	Pro Ile T 275	Tyr Ser Phe	Gly Glu Asn 280	Glu Val Tyr 285							
Lys Gln Val Ile	Phe Glu G 290	Glu Gly Ser	Trp Gly Arg 295	Trp Val Gln 300							
Lys Lys Phe Gln	Lys Tyr I 305	Ile Gly Phe	Ala Pro Cys 310	Ile Phe His 315							
Gly Arg Gly Leu	Phe Ser S	Ser Asp Thr	Trp Gly Leu 325	Val Pro Tyr 330							
Ser Lys Pro Ile	Thr Thr V	Val Val Gly	Glu Pro Ile 340	Thr Ile Pro 345							
Lys Leu Glu His	Pro Thr G	Gln Gln Asp	Ile Asp Leu 355	Tyr His Thr 360							
Met Tyr Met Glu	Ala Leu V 365	al Lys Leu	Phe Asp Lys 370	His Lys Thr 375							
Lys Phe Gly Leu	Pro Glu T 380	Thr Glu Val	Leu Glu Val 385	Asn							
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<220> <221> Artificial Sequence <222> 1-24 <223> Synthetic construct.											
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 <211> 3060
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 <213> Homo sapiens
 <400> 296
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 gcggctgcag gcttgtccag ccggaagccc tgagggcagc tgttcccact 200
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<210> 297

<211> 368

<212> PRT

<213> Homo sapiens

<400> 297

Met Gly Leu Leu Ala Phe Leu Lys Thr Gln Phe Val Leu His Leu 1 5 10 15

Leu Val Gly Phe Val Phe Val Val Ser Gly Leu Val Ile Asn Phe 20 25 30

Val Gln Leu Cys Thr Leu Ala Leu Trp Pro Val Ser Lys Gln Leu 35 40 45

Tyr Arg Arg Leu Asn Cys Arg Leu Ala Tyr Ser Leu Trp Ser Gln 50 55 60

Leu Val Met Leu Leu Glu Trp Trp Ser Cys Thr Glu Cys Thr Leu
65 70 75

Phe Thr Asp Gln Ala Thr Val Glu Arg Phe Gly Lys Glu His Ala 80 85 90

Val Ile Ile Leu Asn His Asn Phe Glu Ile Asp Phe Leu Cys Gly
95 100 105

Trp Thr Met Cys Glu Arg Phe Gly Val Leu Gly Ser Ser Lys Val 110 115 120

Leu Ala Lys Lys Glu Leu Leu Tyr Val Pro Leu Ile Gly Trp Thr 125 130 135

Trp Tyr Phe Leu Glu Ile Val Phe Cys Lys Arg Lys Trp Glu Glu
140 145 150

Asp Arg Asp Thr Val Val Glu Gly Leu Arg Arg Leu Ser Asp Tyr 155 160 165

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Pro Glu Tyr Met Trp Phe Leu Leu Tyr Cys Glu Gly Thr Arg Phe
Thr Glu Thr Lys His Arg Val Ser Met Glu Val Ala Ala Ala Lys
Gly Leu Pro Val Leu Lys Tyr His Leu Leu Pro Arg Thr Lys Gly
 Phe Thr Thr Ala Val Lys Cys Leu Arg Gly Thr Val Ala Ala Val
Tyr Asp Val Thr Leu Asn Phe Arg Gly Asn Lys Asn Pro Ser Leu
Leu Gly Ile Leu Tyr Gly Lys Lys Tyr Glu Ala Asp Met Cys Val
Arg Arg Phe Pro Leu Glu Asp Ile Pro Leu Asp Glu Lys Glu Ala
Ala Gln Trp Leu His Lys Leu Tyr Gln Glu Lys Asp Ala Leu Gln
Glu Ile Tyr Asn Gln Lys Gly Met Phe Pro Gly Glu Gln Phe Lys
                 290
 Pro Ala Arg Arg Pro Trp Thr Leu Leu Asn Phe Leu Ser Trp Ala
Thr Ile Leu Leu Ser Pro Leu Phe Ser Phe Val Leu Gly Val Phe
                 320
Ala Ser Gly Ser Pro Leu Leu Ile Leu Thr Phe Leu Gly Phe Val
Gly Ala Ala Ser Phe Gly Val Arg Arg Leu Ile Gly Glu Ser Leu
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Glu Pro Gly Arg Trp Arg Leu Gln
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<210> 298
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- <212> DNA
- <213> Artificial
- <220>
- <221> Artificial Sequence
- <222> 1-24
- <223> Synthetic construct.
- <400> 298
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- <210> 299
- <211> 21
- <212> DNA

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<220>
<221> Artificial Sequence
<222> 1-21
<223> Synthetic construct.
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<210> 300
<211> 45
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-45
<223> Synthetic construct.
<400> 300
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<210> 301
<211> 1334
<212> DNA
<213> Homo sapiens
<400> 301
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 tcagtttgtc ttgtggggtt ggtggcaggc aggccggctt acgcctgata 200
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 ctggcctgac agaatctcat cttgtttaat gctctcataa gaccacttgt 650
 ttcccttttg cagcacttgc cactcagttg tatctttatg tgcgtttgtg 700
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gttgtatggg ttgtgtctgt tccccagaat gcccagctct gagctgcgtg 750

agggtcaagg gcattgctgt gcctgccagg tatagtgcct acatgtggtg 800 ggtgctcatg ttttagagac taaatggagg aggagatgag gaaaagattg 850 aaatctctca gttcaccaga tggtgtaggg cccagcattg taaattcaca 900 cgttgactgt gcttgtgaat tatctgggga tgcaggtcct gattcagtag 950 gcccaggttg ggcatctcta acaaactccc acgtgatgct gatgctggtc 1000 ctatgaacta tactaaatag taagaatcta tggagccagg ctgggcatgg 1050 tggctcacac ctatgatccc agcactttgg gaggctgagg caggctgatc 1100 acctggagtc aggattcaa gactagcctg gccaacatgg tggaacccca 1150 tctgtactaa aaatacacaa attagctggg catggtgga catgctgta 1200 gtcccagcta cttgggaggc tgaagcaaga gaatcgcttg aacctgggag 1250 gcggaggttg cagtgagccg agatcaggcc actgtattcc aaccagggtg 1300 acagagtgag actctatgtc caaaaaaaaa aaaa 1334

<210> 302 <211> 143

<212> PRT

<213> Homo sapiens

<400> 302

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His Leu Cys Val Cys Phe Ser Phe Ala Leu Ala Leu Gly His Phe 20 25 30

Leu Leu Ile Ser Leu Val Gly Lys Gly Leu Ser Leu Ser Cys Gly
35 40 40

Val Gly Gly Arg Gln Ala Gly Leu Arg Leu Ile Arg Pro Trp Val
50 55 60

Arg Arg Glu Gly Lys Ile Asn Phe Tyr Thr Asn Gly Asp Ser Trp
65 70 75

Gly Leu Arg Pro Ala Ser Ser Val Lys Phe Leu Gly Ser Ala Tyr 80 85 90

Thr Phe Phe Ser Leu Thr Trp His Thr Leu Leu Lys Ala Ser Gln 95 100

Gly Phe Ser Leu Phe Leu Gly Ser Lys Tyr Leu Glu Leu Gln Glu
110 115 120

Pro Ser Trp Ser Gly Pro Cys Pro Pro Gly Gln Leu His Cys Thr 125 130 135

Cys Gly Val Leu Leu Ser Phe Leu

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<210> 303
<211> 1768
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<212> DNA

<213> Homo sapiens

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<210> 304

<211> 109

<212> PRT

<213> Homo sapiens

<400> 304

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Val Phe Cys Ser Leu Val Thr Ser Leu Tyr Leu Pro Asn Thr Glu
20 25 30

Asp Leu Ser Leu Trp Leu Trp Pro Lys Pro Asp Leu His Ser Gly

Thr Arg Thr Glu Val Ser Thr His Thr Val Pro Ser Lys Pro Gly 50 55 60

Thr Ala Ser Pro Cys Trp Pro Leu Ala Gly Ala Val Pro Ser Pro 65 70 75

Thr Val Ser Arg Leu Glu Ala Leu Thr Arg Ala Val Gln Val Ala 80 85 90

Glu Pro Leu Gly Ser Cys Gly Phe Gln Gly Gly Pro Cys Pro Gly 95 100 105

Arg Arg Arg Asp

<210> 305

<211> 989

<212> DNA

<213> Homo sapiens

<400> 305

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<210> 306

<211> 262

<212> PRT

<213> Homo sapiens

<400> 306

Met Thr Gln Pro Val Pro Arg Leu Ser Val Pro Ala Ala Leu Ala 1 5 10 15

Leu Gly Ser Ala Ala Leu Gly Ala Ala Phe Ala Thr Gly Leu Phe 20 25 30

Leu Gly Arg Arg Cys Pro Pro Trp Arg Gly Arg Arg Glu Gln Cys 35 40 45

Leu Leu Pro Pro Glu Asp Ser Arg Leu Trp Gln Tyr Leu Leu Ser 50 60

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Arg Ser Met Arg Glu His Pro Ala Leu Arg Ser Leu Arg Leu Leu
Thr Leu Glu Gln Pro Gln Gly Asp Ser Met Met Thr Cys Glu Gln
Ala Gln Leu Leu Ala Asn Leu Ala Arg Leu Ile Gln Ala Lys Lys
Ala Leu Asp Leu Gly Thr Phe Thr Gly Tyr Ser Ala Leu Ala Leu
Ala Leu Ala Leu Pro Ala Asp Gly Arg Val Val Thr Cys Glu Val
Asp Ala Gln Pro Pro Glu Leu Gly Arg Pro Leu Trp Arg Gln Ala
Glu Ala Glu His Lys Ile Asp Leu Arg Leu Lys Pro Ala Leu Glu
Thr Leu Asp Glu Leu Leu Ala Ala Gly Glu Ala Gly Thr Phe Asp
                                    175
Val Ala Val Val Asp Ala Asp Lys Glu Asn Cys Ser Ala Tyr Tyr
Glu Arg Cys Leu Gln Leu Leu Arg Pro Gly Gly Ile Leu Ala Val
Leu Arg Val Leu Trp Arg Gly Lys Val Leu Gln Pro Pro Lys Gly
                                                        225
Asp Val Ala Ala Glu Cys Val Arg Asn Leu Asn Glu Arg Ile Arg
Arg Asp Val Arg Val Tyr Ile Ser Leu Leu Pro Leu Gly Asp Gly
                245
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<210> 307

<211> 2272

<212> DNA

<213> Homo sapiens

Leu Thr Leu Ala Phe Lys Ile

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<212> PRT

<213> Homo sapiens

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Gly Thr His Glu Thr Ala Phe Leu Gly Pro Lys Asp Leu Phe Pro $50 \,$

Tyr Asp Lys Cys Lys Asp Lys Tyr Gly Lys Pro Asn Lys Arg Lys
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Gly Phe Asn Glu Gly Leu Trp Glu Ile Gln Asn Asn Pro His Ala 80 85 90

Ser Tyr Ser Ala Pro Pro Pro Val Ser Ser Ser Asp Ser Glu Ala 95 100

Pro Glu Ala Asn Pro Ala Asp Gly Ser Asp Ala Asp Glu Asp Asp 110 120

Glu Asp Arg Gly Val Met Ala Val Thr Ala Val Thr Ala Thr Ala
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Ala Ser Asp Arg Met Glu Ser Asp Ser Asp Ser Asp Lys Ser Ser

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Val	Ser	Lys	Arg	Ala 170	Arg	Lys	Ala	Ser	Ser 175	Asp	Leu	Asp	Gln	Ala 180
Ser	Val	Ser	Pro	Ser 185	Glu	Glu	Glu	Asn	Ser 190	Glu	Ser	Ser	Ser	Glu 195
Ser	Glu	Lys	Thr	Ser 200	Asp	Gln	Asp	Phe	Thr 205	Pro	Glu	Lys	Lys	Ala 210
Ala	Val	Arg	Ala	Pro 215	Arg	Arg	Gly	Pro	Leu 220	Gly	Gly	Arg	Lys	Lys 225
Lys	Lys	Ala	Pro	Ser 230	Ala	Ser	Asp	Ser	Asp 235	Ser	Lys	Ala	Asp	Ser 240
Asp	Gly	Ala	Lys	Pro 245	Glu	Pro	Val	Ala	Met 250	Ala	Arg	Ser	Ala	Ser 255
Ser	Ser	Ser	Ser	Ser 260	Ser	Ser	Ser	Ser	Asp 265	Ser	Asp	Val	Ser	Val 270
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Lys	Pro	Arg	Gly	Arg 290	Lys	Pro	Lys	Pro	Glu 295	Arg	Pro	Pro	Ser	Ser 300
Ser	Ser	Ser	Asp	Ser 305	Asp	Ser	Asp	Glu	Val 310	Asp	Arg	Ile	Ser	Glu 315
Trp	Lys	Arg	Arg	Asp 320	Glu	Ala	Arg	Arg	Arg 325	Glu	Leu	Glu	Ala	Arg 330
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Glu	Ala	Glu	Arg	Gly 365	Ser	Gly	Gly	Ser	Ser 370	Gly	Asp	Glu	Leu	Arg 375
Glu	Asp	Asp	Glu	Pro 380	Val	Lys	Lys	Arg	Gly 385	Arg	Lys	Gly	Arg	Gly 390
Arg	Gly	Pro	Pro	Ser 395	Ser	Ser	Asp	Ser	Glu 400	Pro	Glu	Ala	Glu	Leu 405
Glu	Arg	Glu	Ala	Lys 410	Lys	Ser	Ala	Lys	Lys 415	Pro	Gln	Ser	Ser	Ser 420
Thr	Glu	Pro	Ala	Arg 425	Lys	Pro	Gly	Gln	Lys 430	Glu	Lys	Arg	Val	Arg 435

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Lys Lys Glu Pro Ser Val Glu Glu Lys Leu Gln Lys Leu His Ser
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Cys Leu Asn Ala Leu Glu Glu Leu Gly Thr Leu Gln Val Thr Ser
Gln Ile Leu Gln Lys Asn Thr Asp Val Val Ala Thr Leu Lys Lys
Ile Arg Arg Tyr Lys Ala Asn Lys Asp Val Met Glu Lys Ala Ala
Glu Val Tyr Thr Arg Leu Lys Ser Arg Val Leu Gly Pro Lys Ile
Glu Ala Val Gln Lys Val Asn Lys Ala Gly Met Glu Lys Glu Lys
Ala Glu Glu Lys Leu Ala Gly Glu Glu Leu Ala Gly Glu Glu Ala
Pro Gln Glu Lys Ala Glu Asp Lys Pro Ser Thr Asp Leu Ser Ala
Pro Val Asn Gly Glu Ala Thr Ser Gln Lys Gly Glu Ser Ala Glu
Asp Lys Glu His Glu Glu Gly Arg Asp Ser Glu Glu Gly Pro Arg
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Cys Gly Ser Ser Glu Asp Leu His Asp Ser Val Arg Glu Gly Pro
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<212> DNA

<213> Homo sapiens

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Phe Leu Pro Val Thr Gly Thr Leu Lys Gln Asn Ile Pro Arg Leu 35 40 45

Lys Leu Thr Tyr Lys Asp Leu Leu Ser Asn Ser Cys Ile Pro 50 55 60

Phe Leu Gly Ser Ser Glu Gly Leu Asp Phe Gln Thr Leu Leu 65 70 75

Asp Glu Glu Arg Gly Arg Leu Leu Gly Ala Lys Asp His Ile

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Asp	Ile	Ile	Phe	Lys 170	Leu	Asp	Thr	His	Asn 175	Leu	Glu	Ser	Gly	Arg 180
Leu	Lys	Cys	Pro	Phe 185	Asp	Pro	Gln	Gln	Pro 190	Phe	Ala	Ser	Val	Met 195
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Lys	Asp	Thr	Ala	Phe 215	Thr	Arg	Ser	Leu	Gly 220	Pro	Thr	His	Asp	His 225
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Leu	Pro	Thr	Arg	Asp 335	Glu	Arg	Asn	Pro	Val 340	Val	Tyr	Gly	Val	Phe 345
Thr	Thr	Thr	Ser	Ser 350	Ile	Phe	Lys	Gly	Ser 355	Ala	Val	Cys	Val	Tyr 360
Ser	Met	Ala	Asp	Ile	Arg	Ala	Val	Phe	Asn	Gly	Pro	Tyr	Ala	His

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Gly Met Tyr Tyr Cys Lys Ala Gln Glu His Thr Phe Ile His Thr

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Asr	Thr	Gln	Arg	Ala 695	Glu	His	Glu	Glu	Gly 700	Gln	Val	Lys	Asp	Le:
Leu	ı Ala	Glu	Ser	Arg 710	Leu	Arg	Tyr	Lys	Asp 715	Tyr	Ile	Gln	Ile	Leu 720
Ser	Ser	Pro	Asn	Phe 725	Ser	Leu	Asp	Gln	Tyr 730	Cys	Glu	Gln	Met	Trp 735
His	arg	Glu	Lys	Arg 740	Arg	Gln	Arg	Asn	Lys 745	Gly	Gly	Pro	Lys	Trp 750
Lys	His	Met	Gln	Glu 755	Met	Lys	Lys	Lys	Arg 760	Asn	Arg	Arg	His	His 765
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<213> Homo sapiens

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<213> Homo sapiens

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Asp 1	Lys	Ala	Leu	Asp 335	Phe	Pro	Gly	Phe	Leu 340	Asp	Met	Met	Ala	Pro 345
Arg :	Leu	Arg	Pro	Met 350	Arg	Pro	Pro	Pro	Pro 355	Pro	Pro	Ala	Lys	Ala 360
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Leu Pro Ser Ala Arg Leu Ala Ser Pro Leu Pro Arg Glu Glu Glu 50 55 60

Ile Val Phe Pro Glu Lys Leu Asn Gly Ser Val Leu Pro Gly Ser 65 70 75

Gly Ala Pro Ala Arg Leu Leu Cys Arg Leu Gl
n Ala Phe Gly Glu 80 85 90

Thr Leu Leu Glu Leu Glu Gln Asp Ser Gly Val Gln Val Glu 95 100 105

Gly Leu Thr Val Gln Tyr Leu Gly Gln Ala Pro Glu Leu Leu Gly 110 115 120

Gly Ala Glu Pro Gly Thr Tyr Leu Thr Gly Thr Ile Asn Gly Asp 125 130 135

Pro Glu Ser Val Ala Ser Leu His Trp Asp Gly Gly Ala Leu Leu

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Glu Gly Gly	Thr Pro	Asn S	Ser	Ala	Gly	Gly 175	Pro	Gly	Ala	His	Ile 180
Leu Arg Arg	Lys Ser 185	Pro I	Ala	Ser	Gly	Gln 190	Gly	Pro	Met	Cys	Asn 195
Val Lys Ala	Pro Leu 200	Gly :	Ser	Pro	Ser	Pro 205	Arg	Pro	Arg	Arg	Ala 210
Lys Arg Phe	Ala Ser 215	Leu :	Ser	Arg	Phe	Val 220	Glu	Thr	Leu	Val	Val 225
Ala Asp Asp	Lys Met 230	Ala	Ala	Phe	His	Gly 235	Ala	Gly	Leu	Lys	Arg 240
Tyr Leu Leu	Thr Val 245	Met 3	Ala	Ala	Ala	Ala 250	Lys	Ala	Phe	Lys	His 255
Pro Ser Ile	Arg Asn 260	Pro '	Val	Ser	Leu	Val 265	Val	Thr	Arg	Leu	Val 270
Ile Leu Gly	Ser Gly 275	Glu	Glu	Gly	Pro	Gln 280	Val	Gly	Pro	Ser	Ala 285
Ala Gln Thr	Leu Arg 290	Ser	Phe	Cys	Ala	Trp 295	Gln	Arg	Gly	Leu	Asn 300
Thr Pro Glu	Asp Ser 305	Gly	Pro	Asp	His	Phe 310	Asp	Thr	Ala	Ile	Leu 315
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Ala Ile Val	Glu Asp 350		Gly	Leu	Gln	Ser 355	Ala	Phe	Thr	Ala	Ala 360
His Glu Leu	Gly His 365		Phe	Asn	Met	Leu 370	His	Asp	Asn	Ser	Lys 375
Pro Cys Ile	Ser Leu 380		Gly	Pro	Leu	Ser 385	Ţhr	Ser	Arg	His	Val 390
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Gly His Cys	Leu Leu 425		Lys	Pro	Glu	Ala 430	Pro	Leu	His	Leu	Pro 435

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Thr	Glu	Asp	Cys	Pro 575	Thr	Gly	Ser	Ala	Leu 580	Thr	Phe	Arg	Glu	Glu 585
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Pro	Ala	Gly	Ala	Thr 710	His	Ile	Leu	Val	Arg 715	Gln	Gln	Gly	Asn	Pro 720
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735 730 725 Tyr Ala Leu Asn Gly Glu Tyr Thr Leu Met Pro Ser Pro Thr Asp Val Val Leu Pro Gly Ala Val Ser Leu Arg Tyr Ser Gly Ala Thr 755 Ala Ala Ser Glu Thr Leu Ser Gly His Gly Pro Leu Ala Gln Pro Leu Thr Leu Gln Val Leu Val Ala Gly Asn Pro Gln Asp Thr Arg Leu Arg Tyr Ser Phe Phe Val Pro Arg Pro Thr Pro Ser Thr Pro Arg Pro Thr Pro Gln Asp Trp Leu His Arg Arg Ala Gln Ile Leu 815 Glu Ile Leu Arg Arg Arg Pro Trp Ala Gly Arg Lys 830 <210> 318 <211> 23 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-23 <223> Synthetic construct. <400> 318 ccctgaagct gccagatggc tcc 23 <210> 319 <211> 24 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-24 <223> Synthetic construct. <400> 319 ctgtgctctt cggtgcagcc agtc 24 <210> 320 <211> 43 <212> DNA <213> Artificial

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Ile Cys Gly Leu Val Phe Gly Ile Leu Ala Leu Thr Leu Ile Val 35 40 45

Leu Phe Trp Gly Ser Lys His Phe Trp Pro Glu Val Pro Lys Lys 50 55 60

Ala Tyr Asp Met Glu His Thr Phe Tyr Ser Asn Gly Glu Lys Lys
65 70 75

Lys Ile Tyr Met Glu Ile Asp Pro Val Thr Arg Thr Glu Ile Phe 80 85 90

Lys Asn Gly Tyr Thr Gly Ile Tyr Phe Val Gly Leu Gln Lys Cys 110 115 120

Phe Ile Lys Thr Gln Ile Lys Val Ile Pro Glu Phe Ser Glu Pro 125 130 135

Glu Glu Glu Ile Asp Glu Asn Glu Glu Ile Thr Thr Thr Phe Phe 140 145 150

Glu Gln Ser Val Ile Trp Val Pro Ala Glu Lys Pro Ile Glu Asn 155 160 165

Arg Asp Phe Leu Lys Asn Ser Lys Ile Leu Glu Ile Cys Asp Asn 170 175 180

Val Thr Met Tyr Trp Ile Asn Pro Thr Leu Ile Ser Val Ser Glu
185 190 195

Leu Gln Asp Phe Glu Glu Glu Gly Glu Asp Leu His Phe Pro Ala 200 205 210

Asn Glu Lys Lys Gly Ile Glu Gln Asn Glu Gln Trp Val Val Pro 215 220 225

Gln Val Lys Val Glu Lys Thr Arg His Ala Arg Gln Ala Ser Glu 230 235 240

Glu Glu Leu Pro Ile Asn Asp Tyr Thr Glu Asn Gly Ile Glu Phe \$245\$ \$250\$

Asp Pro Met Leu Asp Glu Arg Gly Tyr Cys Cys Ile Tyr Cys Arg 260 265 270

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Arg Gly Asn Arg Tyr Cys Arg Arg Val Cys Glu Pro Leu Leu Gly
Tyr Tyr Pro Tyr Pro Tyr Cys Tyr Gln Gly Gly Arg Val Ile Cys
Arg Val Ile Met Pro Cys Asn Trp Trp Val Ala Arg Met Leu Gly
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Arg Val

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gggccccctc agtgacctcg gccacgcaca gcgggtacag gctgaacgac 800

tacgtgtgag tccccacage ctgcttctcc cctgggctgc tgtgggctgg 850

gtccccggcg ggactgtcaa tggaggcagg ggttccagca caaagtttac 900

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ctttagagca cagggacaga gggggaaata agaggaggag aaagctctct 1000

ataccaaaga ctgaaaaaaa aaatcctgtc tgtttttgta tttattatat 1050 atatttatgt gggtgatttg ataacaagtt taatataaag tgacttggga 1100 gtttggtcag tggggttggt ttgtgatcca ggaataaacc ttgcggatgt 1150 ggctgtttat gaaaaaaaaa aaaa 1174

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<211> 239

<212> PRT

<213> Homo sapiens

<400> 324

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1 10 15

Leu Gly Met Val Gly Thr Leu Ile Thr Thr Ile Leu Pro His Trp
20 25 30

Arg Arg Thr Ala His Val Gly Thr Asn Ile Leu Thr Ala Val Ser 35 40 45

Tyr Leu Lys Gly Leu Trp Met Glu Cys Val Trp His Ser Thr Gly
50 55 60

Ile Tyr Gln Cys Gln Ile Tyr Arg Ser Leu Leu Ala Leu Pro Gln 65 70 75

Asp Leu Gln Ala Ala Arg Ala Leu Met Val Ile Ser Cys Leu Leu 80 85 90

Ser Gly Ile Ala Cys Ala Cys Ala Val Ile Gly Met Lys Cys Thr 95 100 105

Arg Cys Ala Lys Gly Thr Pro Ala Lys Thr Thr Phe Ala Ile Leu 110 115 120

Gly Gly Thr Leu Phe Ile Leu Ala Gly Leu Leu Cys Met Val Ala 125 130 135

Val Ser Trp Thr Thr Asn Asp Val Val Gln Asn Phe Tyr Asn Pro 140 145 150

Leu Leu Pro Ser Gly Met Lys Phe Glu Ile Gly Gln Ala Leu Tyr 155 160 165

Leu Gly Phe Ile Ser Ser Ser Leu Ser Leu Ile Gly Gly Thr Leu 170 175 180

Leu Cys Leu Ser Cys Gln Asp Glu Ala Pro Tyr Arg Pro Tyr Gln
185 190 190

Ala Pro Pro Arg Ala Thr Thr Thr Thr Ala Asn Thr Ala Pro Ala 200 205 210

Tyr Gln Pro Pro Ala Ala Tyr Lys Asp Asn Arg Ala Pro Ser Val 215 220 225

Thr Ser Ala Thr His Ser Gly Tyr Arg Leu Asn Asp Tyr Val 230 235

<210> 325 <211> 2121

<212> DNA

<213> Homo sapiens

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<210> 326

<211> 261

<212> PRT

<213> Homo sapiens

<400> 326

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Leu Gly Leu Ala Gly Cys Ile Ala Ala Thr Gly Met Asp Met Trp 20 25 30

Ser Thr Gln Asp Leu Tyr Asp Asn Pro Val Thr Ser Val Phe Gln
35 40 45

Tyr Glu Gly Leu Trp Arg Ser Cys Val Arg Gln Ser Ser Gly Phe
50 55 60

Thr Glu Cys Arg Pro Tyr Phe Thr Ile Leu Gly Leu Pro Ala Met 65 70 75

Leu Gln Ala Val Arg Ala Leu Met Ile Val Gly Ile Val Leu Gly

90 85 80 Ala Ile Gly Leu Leu Val Ser Ile Phe Ala Leu Lys Cys Ile Arg 100 95 Ile Gly Ser Met Glu Asp Ser Ala Lys Ala Asn Met Thr Leu Thr 115 Ser Gly Ile Met Phe Ile Val Ser Gly Leu Cys Ala Ile Ala Gly Val Ser Val Phe Ala Asn Met Leu Val Thr Asn Phe Trp Met Ser Thr Ala Asn Met Tyr Thr Gly Met Gly Gly Met Val Gln Thr Val Gln Thr Arg Tyr Thr Phe Gly Ala Ala Leu Phe Val Gly Trp Val 170 Ala Gly Gly Leu Thr Leu Ile Gly Gly Val Met Met Cys Ile Ala 185 Cys Arg Gly Leu Ala Pro Glu Glu Thr Asn Tyr Lys Ala Val Ser 200 Tyr His Ala Ser Gly His Ser Val Ala Tyr Lys Pro Gly Gly Phe 215 Lys Ala Ser Thr Gly Phe Gly Ser Asn Thr Lys Asn Lys Lys Ile Tyr Asp Gly Gly Ala Arg Thr Glu Asp Glu Val Gln Ser Tyr Pro 245 Ser Lys His Asp Tyr Val

<210> 327

<211> 2010

<212> DNA

<213> Homo sapiens

260

<400> 327

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tgctgcttcc gtgatgtcct tcttggcttt catgatggcc atccttggca 400 tqaaatqcac caqqtqcacq qqqqacaatq agaaggtgaa ggctcacatt 450 ctgctgacgg ctggaatcat cttcatcatc acgggcatgg tggtgctcat 500 ccctgtgagc tgggttgcca atgccatcat cagagatttc tataactcaa 550 tagtgaatgt tgcccaaaaa cgtgagcttg gagaagctct ctacttagga 600 tggaccacgg cactggtgct gattgttgga ggagctctgt tctgctgcgt 650 tttttgttgc aacgaaaaga gcagtagcta cagatactcg ataccttccc 700 atcgcacaac ccaaaaaagt tatcacaccg gaaagaagtc accgagcgtc 750 tactccagaa gtcagtatgt gtagttgtgt atgttttttt aactttacta 800 taaaqccatg caaatgacaa aaatctatat tactttctca aaatggaccc 850 caaagaaact ttgatttact gttcttaact gcctaatctt aattacagga 900 actgtgcatc agctatttat gattctataa gctatttcag cagaatgaga 950 tattaaaccc aatgctttga ttgttctaga aagtatagta atttgttttc 1000 taaggtggtt caagcatcta ctcttttat catttacttc aaaatgacat 1050 tgctaaagac tgcattattt tactactgta atttctccac gacatagcat 1100 tatgtacata gatgagtgta acatttatat ctcacataga gacatgctta 1150 tatggtttta tttaaaatga aatgccagtc cattacactg aataaataga 1200 actcaactat tgcttttcag ggaaatcatg gatagggttg aagaaggtta 1250 ctattaattg tttaaaaaca gcttagggat taatgtcctc catttataat 1300 gaagattaaa atgaaggctt taatcagcat tgtaaaggaa attgaatggc 1350 tttctgatat gctgtttttt agcctaggag ttagaaatcc taacttcttt 1400 atcctcttct cccagaggct ttttttttct tgtgtattaa attaacattt 1450 ttaaaacgca gatattttgt caaggggctt tgcattcaaa ctgcttttcc 1500 agggctatac tcagaagaaa gataaaagtg tgatctaaga aaaagtgatg 1550 gttttaggaa agtgaaaata tttttgtttt tgtatttgaa gaagaatgat 1600 gcattttgac aagaaatcat atatgtatgg atatatttta ataagtattt 1650 gagtacagac tttgaggttt catcaatata aataaaagag cagaaaaata 1700 tgtcttggtt ttcatttgct taccaaaaaa acaacaacaa aaaaagttgt 1750 cctttgagaa cttcacctgc tcctatgtgg gtacctgagt caaaattgtc 1800 attttgttc tgtgaaaaat aaatttcctt cttgtaccat ttctgtttag 1850 ttttactaaa atctgtaaat actgtattt tctgtttatt ccaaatttga 1900 tgaaactgac aatccaattt gaaagtttgt gtcgacgtct gtctagctta 1950 aatgaatgtg ttctatttgc tttatacatt tatattaata aattgtacat 2000 ttttctaatt 2010

- <210> 328
- <211> 225
- <212> PRT
- <213> Homo sapiens
- <400> 328
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- Val Gly Met Val Gly Thr Val Ala Val Thr Val Met Pro Gln Trp 20 25 30
- Arg Val Ser Ala Phe Ile Glu Asn Asn Ile Val Val Phe Glu Asn 35 40 45
- Phe Trp Glu Gly Leu Trp Met Asn Cys Val Arg Gln Ala Asn Ile 50 55 60
- Arg Met Gln Cys Lys Ile Tyr Asp Ser Leu Leu Ala Leu Ser Pro 65 70 75
- Asp Leu Gln Ala Ala Arg Gly Leu Met Cys Ala Ala Ser Val Met $80 \hspace{1cm} 85 \hspace{1cm} 90$
- Ser Phe Leu Ala Phe Met Met Ala Ile Leu Gly Met Lys Cys Thr 95 100 105
- Arg Cys Thr Gly Asp Asn Glu Lys Val Lys Ala His Ile Leu Leu 110 115 120
- Thr Ala Gly Ile Ile Phe Ile Ile Thr Gly Met Val Val Leu Ile 125 130 135
- Pro Val Ser Trp Val Ala Asn Ala Ile Ile Arg Asp Phe Tyr Asn 140 145 150
- Ser Ile Val Asn Val Ala Gln Lys Arg Glu Leu Gly Glu Ala Leu 155 160 165
- Tyr Leu Gly Trp Thr Thr Ala Leu Val Leu Ile Val Gly Gly Ala 170 175 180
- Leu Phe Cys Cys Val Phe Cys Cys Asn Glu Lys Ser Ser Tyr 185 190 195
- Arg Tyr Ser Ile Pro Ser His Arg Thr Thr Gln Lys Ser Tyr His 200 205 210

Thr Gly Lys Lys Ser Pro Ser Val Tyr Ser Arg Ser Gln Tyr Val 215 220 225

<210> 329

<211> 1315

<212> DNA

<213> Homo sapiens

<400> 329

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<210> 330

<211> 220

<212> PRT

<213> Homo sapiens

<400> 330

Met Ala Ser Ala Gly Met Gln Ile Leu Gly Val Val Leu Thr Leu $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Leu Gly Trp Val Asn Gly Leu Val Ser Cys Ala Leu Pro Met Trp
20 25 30

Lys Val Thr Ala Phe Ile Gly Asn Ser Ile Val Val Ala Gln Val 35 40 45

Val Trp Glu Gly Leu Trp Met Ser Cys Val Val Gln Ser Thr Gly
50 55 60

Gln Met Gln Cys Lys Val Tyr Asp Ser Leu Leu Ala Leu Pro Gln 65 70 75

Asp Leu Gln Ala Ala Arg Ala Leu Cys Val Ile Ala Leu Leu Val 80 85 90

Ala Leu Phe Gly Leu Leu Val Tyr Leu Ala Gly Ala Lys Cys Thr 95 100 105

Thr Cys Val Glu Glu Lys Asp Ser Lys Ala Arg Leu Val Leu Thr 110 115 120

Ser Gly Ile Val Phe Val Ile Ser Gly Val Leu Thr Leu Ile Pro 125 130 135

Val Cys Trp Thr Ala His Ala Ile Ile Arg Asp Phe Tyr Asn Pro 140 145 150

Leu Val Ala Glu Ala Gln Lys Arg Glu Leu Gly Ala Ser Leu Tyr 155 160 165

Leu Gly Trp Ala Ala Ser Gly Leu Leu Leu Gly Gly Gly Leu 170 175 180

Leu Cys Cys Thr Cys Pro Ser Gly Gly Ser Gln Gly Pro Ser His
185 190 195

Tyr Met Ala Arg Tyr Ser Thr Ser Ala Pro Ala Ile Ser Arg Gly 200 205 210

Pro Ser Glu Tyr Pro Thr Lys Asn Tyr Val 215 220

<210> 331

<211> 1160

<212> DNA

<213> Homo sapiens

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Met Asn Cys Ile Arg Gln Ala Arg Val Arg Leu Gln Cys Lys Phe

<210> 332

<211> 173

<212> PRT

<213> Homo sapiens

<400> 332

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<210> 333

<212> DNA

<213> Homo sapiens

<400> 333

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- <211> 85
- <212> PRT
- <213> Homo sapiens
- <400> 334
- Met Lys Ile Thr Gly Gly Leu Leu Leu Cys Thr Val Val Tyr 1 5 10 15
- Phe Cys Ser Ser Ser Glu Ala Ala Ser Leu Ser Pro Lys Lys Val 20 25 30
- Asp Cys Ser Ile Tyr Lys Lys Tyr Pro Val Val Ala Ile Pro Cys
 35 40 45
- Pro Ile Thr Tyr Leu Pro Val Cys Gly Ser Asp Tyr Ile Thr Tyr 50 55 60
- Gly Asn Glu Cys His Leu Cys Thr Glu Ser Leu Lys Ser Asn Gly
 65 70 75
- Arg Val Gln Phe Leu His Asp Gly Ser Cys 80 85
- <210> 335
- <211> 742
- <212> DNA
- <213> Homo sapiens
- <400> 335
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- ctgctcgcgc cccgccgcca tggctgcctc ccccgcgcgg cctgctgtcc 100
- tggccctgac cgggctggcg ctgctcctgc tcctgtgctg gggcccaggt 150
- ggcataagtg gaaataaact caagctgatg cttcaaaaac gagaagcacc 200
- tgttccaact aagactaaag tggccgttga tgagaataaa gccaaagaat 250
- teettggeag eetgaagege eagaagegge agetgtggga eeggaetegg 300
- cccgaggtgc agcagtggta ccagcagttt ctctacatgg gctttgatga 350
- agcgaaattt gaagatgaca tcacctattg gcttaacaga gatcgaaatg 400
- gacatgaata ctatggcgat tactaccaac gtcactatga tgaagactct 450
- gcaattggtc cccggagccc ctacggcttt aggcatggag ccagcgtcaa 500
- ctacgatgac tactaaccat gacttgccac acgctgtaca agaagcaaat 550
- agegattete tteatgtate teetaatgee ttacactact tggtttetga 600

tttgctctat ttcagcagat cttttctacc tactttgtgt gatcaaaaaa 650 gaagagttaa aacaacacat gtaaatgcct tttgatattt catgggaatg 700 cctctcattt aaaaatagaa ataaagcatt ttgttaaaaa ga 742

<210> 336

<211> 148

<212> PRT

<213> Homo sapiens

<400> 336

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1 5 10 15

Leu Ala Leu Leu Leu Leu Cys Trp Gly Pro Gly Gly Ile Ser 20 25 30

Gly Asn Lys Leu Lys Leu Met Leu Gln Lys Arg Glu Ala Pro Val 35 40 45

Pro Thr Lys Thr Lys Val Ala Val Asp Glu Asn Lys Ala Lys Glu . 50 55 60

Phe Leu Gly Ser Leu Lys Arg Gln Lys Arg Gln Leu Trp Asp Arg
65 70 75

Thr Arg Pro Glu Val Gln Gln Trp Tyr Gln Gln Phe Leu Tyr Met 80 85 90

Gly Phe Asp Glu Ala Lys Phe Glu Asp Asp Ile Thr Tyr Trp Leu 95 100 105

Asn Arg Asp Arg Asn Gly His Glu Tyr Tyr Gly Asp Tyr Tyr Gln 110 115

Arg His Tyr Asp Glu Asp Ser Ala Ile Gly Pro Arg Ser Pro Tyr 125 130 135

Gly Phe Arg His Gly Ala Ser Val Asn Tyr Asp Asp Tyr 140 145

<210> 337

<211> 1310

<212> DNA

<213> Homo sapiens

<400> 337

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tgaaggggtg ggtgatgagg tgaccgtcct tttctcggtg cttgcctgcc 150
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gacccactgc cccagccgtc agggacccca acgccatccc agcccagcgc 250

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<213> Homo sapiens

<400> 338

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Ser Val Leu Ala Cys Leu Leu Val Leu Ala Leu Ala Trp Val Ser 20 25 30

Thr His Thr Ala Glu Gly Gly Asp Pro Leu Pro Gln Pro Ser Gly
35 40 45

Thr Pro Thr Pro Ser Gln Pro Ser Ala Ala Met Ala Ala Thr Asp Ser Met Arg Gly Glu Ala Pro Gly Ala Glu Thr Pro Ser Leu Arg 70 His Arg Gly Gln Ala Ala Gln Pro Glu Pro Ser Thr Gly Phe Thr Ala Thr Pro Pro Ala Pro Asp Ser Pro Gln Glu Pro Leu Val Leu 95 Arg Leu Lys Phe Leu Asn Asp Ser Glu Gln Val Ala Arg Ala Trp 115 110 Pro His Asp Thr Ile Gly Ser Leu Lys Arg Thr Gln Phe Pro Gly 135 Arg Glu Gln Gln Val Arg Leu Ile Tyr Gln Gly Gln Leu Leu Gly 150 Asp Asp Thr Gln Thr Leu Gly Ser Leu His Leu Pro Pro Asn Cys 165 160 Val Leu His Cys His Val Ser Thr Arg Val Gly Pro Pro Asn Pro 180 170 Pro Cys Pro Pro Gly Ser Glu Pro Gly Pro Ser Gly Leu Glu Ile 190 185 Gly Ser Leu Leu Leu Pro Leu Leu Leu Leu Leu Leu Leu Leu 205 Trp Tyr Cys Gln Ile Gln Tyr Arg Pro Phe Phe Pro Leu Thr Ala 220 Thr Leu Gly Leu Ala Gly Phe Thr Leu Leu Leu Ser Leu Leu Ala 240 235

Phe Ala Met Tyr Arg Pro 245

<210> 339

<211> 849

<212> DNA

<213> Homo sapiens

<400> 339

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<210> 340

<211> 148

<212> PRT

<213> Homo sapiens

<400> 340

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Leu Asn Gln Ala Ser Leu Ile Ser Arg Cys Asp Leu Ala Gln Val 20 25 30

Leu Gln Leu Glu Asp Leu Asp Gly Phe Glu Gly Tyr Ser Leu Ser 35 40 45

Asp Trp Leu Cys Leu Ala Phe Val Glu Ser Lys Phe Asn Ile Ser 50 55 60

Lys Ile Asn Glu Asn Ala Asp Gly Ser Phe Asp Tyr Gly Leu Phe
65 70 75

Gln Ile Asn Ser His Tyr Trp Cys Asn Asp Tyr Lys Ser Tyr Ser 80 85 90

Glu Asn Leu Cys His Val Asp Cys Gln Asp Leu Leu Asn Pro Asn 95 100 105

Leu Leu Ala Gly Ile His Cys Ala Lys Arg Ile Val Ser Gly Ala 110 115 120

Arg Gly Met Asn Asn Trp Val Glu Trp Arg Leu His Cys Ser Gly 125 130 135

Arg Pro Leu Ser Tyr Trp Leu Thr Gly Cys Arg Leu Arg

140 145

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<211> 2575
<212> DNA
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 gtgaatgggc tttcagaagg caattaaaga aatccactca gagaggactt 250
 ggggtgaaac ttgggtcctg tggttttctg attgtaagtg gaagcaggtc 300
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 ctccagttcc tcctgctgct cctgatgctg ggatgcgtcc tgatgatggt 550
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<211> 639

<212> PRT

<213> Homo sapiens

<400> 347

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Phe Leu Leu Leu Leu Met Leu Gly Cys Val Leu Met Met Val 20 25 30

Ala Met Leu His Pro Pro His His Thr Leu His Gln Thr Val Thr
35 40 45

Ala Gln Ala Ser Lys His Ser Pro Glu Ala Arg Tyr Arg Leu Asp
50 55 60

Phe Gly Glu Ser Gln Asp Trp Val Leu Glu Ala Glu Asp Glu Gly 65 70 75

Glu Glu Tyr Ser Pro Leu Glu Gly Leu Pro Pro Phe Ile Ser Leu 80 85 90

Arg Glu Asp Gln Leu Leu Val Ala Val Ala Leu Pro Gln Ala Arg 95 100 105

Arg Asn Gln Ser Gln Gly Arg Arg Gly Gly Ser Tyr Arg Leu Ile 110 115 120

Lys Gln Pro Arg Arg Gln Asp Lys Glu Ala Pro Lys Arg Asp Trp
125 130 135

Gly Ala Asp Glu Asp Gly Glu Val Ser Glu Glu Glu Glu Leu Thr 140 145

Pro Phe Ser Leu Asp Pro Arg Gly Leu Gln Glu Ala Leu Ser Ala 155 160 165

Arg Ile Pro Leu Gln Arg Ala Leu Pro Glu Val Arg His Pro Leu 170 175 180

Cys Leu Gln Gln His Pro Gln Asp Ser Leu Pro Thr Ala Ser Val 185 190 195

Ile Leu Cys Phe His Asp Glu Ala Trp Ser Thr Leu Leu Arg Thr 200 205 210

Val His Ser Ile Leu Asp Thr Val Pro Arg Ala Phe Leu Lys Glu 215 220 225

Ile Ile Leu Val Asp Asp Leu Ser Gln Gln Gly Gln Leu Lys Ser 230 235 240

Ala Leu Ser Glu Tyr Val Ala Arg Leu Glu Gly Val Lys Leu Leu 245 250 255

Arg	Ser	Asn	Lys	Arg 260	Leu	Gly	Ala	Ile	Arg 265	Ala	Arg	Met	Leu	Gly 270
Ala	Thr	Arg	Ala	Thr 275	Gly	Asp	Val	Leu	Val 280	Phe	Met	Asp	Ala	His 285
Cys	Glu	Cys	His	Pro 290	Gly	Trp	Leu	Glu	Pro 295	Leu	Leu	Ser	Arg	Ile 300
Ala	Gly	Asp	Arg	Ser 305	Arg	Val	Val	Ser	Pro 310	Val	Ile	Asp	Val	Ile 315
Asp	Trp	Lys	Thr	Phe 320	Gln	Tyr	Tyr	Pro	Ser 325	Lys	Asp	Leu	Gln	Arg 330
Gly	Val	Leu	Asp	Trp 335	Lys	Leu	Asp	Phe	His 340	Trp	Glu	Pro	Leu	Pro 345
Glu	His	Val	Arg	Lys 350	Ala	Leu	Gln	Ser	Pro 355	Ile	Ser	Pro	Ile	Arg 360
Ser	Pro	Val	Val	Pro 365	Gly	Glu	Val	Val	Ala 370	Met	Asp	Arg	His	Tyr 375
Phe	Gln	Asn	Thr	Gly 380	Ala	Tyr	Asp	Ser	Leu 385	Met	Ser	Leu	Arg	Gly 390
Gly	Glu	Asn	Leu	Glu 395	Leu	Ser	Phe	Lys	Ala 400	Trp	Leu	Cys	Gly	Gly 405
Ser	Val	Glu	Ile	Leu 410	Pro	Cys	Ser	Arg	Val 415	Gly	His	Ile	Tyr	Gln 420
Asn	Gln	Asp	Ser	His 425	Ser	Pro	Leu	Asp	Gln 430	Glu	Ala	Thr	Leu	Arg 435
Asn	Arg	Val	Arg	Ile 440	Ala	Glu	Thr	Trp	Leu 445	Gly	Ser	Phe	Lys	Glu 450
Thr	Phe	Tyr	Lys	His 455	Ser	Pro	Glu	Ala	Phe 460	Ser	Leu	Ser	Lys	Ala 465
Glu	Lys	Pro	Asp	Cys 470	Met	Glu	Arg	Leu	Gln 475	Leu	Gln	Arg	Arg	Leu 480
Gly	Суз	Arg	Thr	Phe 485	His	Trp	Phe	Leu	Ala 490	Asn	Val	Tyr	Pro	Glu 495
Leu	Tyr	Pro	Ser	Glu 500	Pro	Arg	Pro	Ser	Phe 505	Ser	Gly	Lys	Leu	His 510
Asn	Thr	Gly	Leu	Gly 515	Leu	Cys	Ala	Asp	Cys 520	Gln	Ala	Glu	Gly	Asp 525
Ile	Leu	Gly	Cys	Pro 530	Met	Val	Leu	Ala	Pro 535	Cys	Ser	Asp	Ser	Arg 540
Gln	Gln	Gln	Tyr	Leu	Gln	His	Thr	Ser	Arg	Lys	Glu	Ile	His	Phe

545 550 555 Gly Ser Pro Gln His Leu Cys Phe Ala Val Arg Gln Glu Gln Val 565 Ile Leu Gln Asn Cys Thr Glu Glu Gly Leu Ala Ile His Gln Gln His Trp Asp Phe Gln Glu Asn Gly Met Ile Val His Ile Leu Ser Gly Lys Cys Met Glu Ala Val Val Gln Glu Asn Asn Lys Asp Leu Tyr Leu Arg Pro Cys Asp Gly Lys Ala Arg Gln Gln Trp Arg Phe Asp Gln Ile Asn Ala Val Asp Glu Arg 635 <210> 348 <211> 23 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-23 <223> Synthetic construct. <400> 348 ggagaggtgg tggccatgga cag 23 <210> 349 <211> 24 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-24 <223> Synthetic construct. <400> 349 ctgtcactgc aaggagccaa cacc 24 <210> 350 <211> 45 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-45 <223> Synthetic construct. <400> 350 tatgtcgctg cgaggtggtg aaaacctcga actgtctttc aaggc 45

<210> 351 <211> 2524 <212> DNA <213> Homo sapiens

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<211> 243

<212> PRT

<213> Homo sapiens

<400> 352

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Ser Glu Ile Pro Lys Gly Lys Gln Lys Ala Gln Leu Arg Gln Arg
Glu Val Val Asp Leu Tyr Asn Gly Met Cys Leu Gln Gly Pro Ala
Gly Val Pro Gly Arg Asp Gly Ser Pro Gly Ala Asn Val Ile Pro
Gly Thr Pro Gly Ile Pro Gly Arg Asp Gly Phe Lys Gly Glu Lys
Gly Glu Cys Leu Arg Glu Ser Phe Glu Glu Ser Trp Thr Pro Asn
Tyr Lys Gln Cys Ser Trp Ser Ser Leu Asn Tyr Gly Ile Asp Leu
                110
                                    115
Gly Lys Ile Ala Glu Cys Thr Phe Thr Lys Met Arg Ser Asn Ser
Ala Leu Arg Val Leu Phe Ser Gly Ser Leu Arg Leu Lys Cys Arg
                140
Asn Ala Cys Cys Gln Arg Trp Tyr Phe Thr Phe Asn Gly Ala Glu
Cys Ser Gly Pro Leu Pro Ile Glu Ala Ile Ile Tyr Leu Asp Gln
                170
                                    175
                                                        180
Gly Ser Pro Glu Met Asn Ser Thr Ile Asn Ile His Arg Thr Ser
Ser Val Glu Gly Leu Cys Glu Gly Ile Gly Ala Gly Leu Val Asp
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Ala Ser Thr Gly Trp Asn Ser Val Ser Arg Ile Ile Ile Glu Glu
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Leu Pro Lys

<210> 353

<211> 480

<212> DNA

<213> Homo sapiens

<400> 353

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<210> 354

<211> 121

<212> PRT

<213> Homo sapiens

<400> 354

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Gly Val Leu Ala Pro Ala Val Leu Thr Asp Asp Val Pro Gln Glu 20 25 30

Pro Val Pro Thr Leu Trp Asn Glu Pro Ala Glu Leu Pro Ser Gly 35 40 45

Glu Gly Pro Val Glu Ser Thr Ser Pro Gly Arg Glu Pro Val Asp
50 55 60

Thr Gly Pro Pro Ala Pro Thr Val Ala Pro Gly Pro Glu Asp Ser 65 70 75

Thr Ala Gln Glu Arg Leu Asp Gln Gly Gly Gly Ser Leu Gly Pro 80 85 90

Gly Ala Ile Ala Ala Ile Val Ile Ala Ala Leu Leu Ala Thr Cys 95 100 105

Val Val Leu Ala Leu Val Val Val Ala Leu Arg Lys Phe Ser Ala 110 115 120

Ser

<210> 355

<211> 2134

<212> DNA

<213> Homo sapiens

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<210> 356

<211> 157

<212> PRT

<213> Homo sapiens

<400> 356

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His Gly Cys Leu His Cys His Ser Asn Phe Ser Lys Lys Phe Ser 20 25 30

Phe Tyr Arg His His Val Asn Phe Lys Ser Trp Trp Val Gly Asp 35 40 45

Ile Pro Val Ser Gly Ala Leu Leu Thr Asp Trp Ser Asp Asp Thr 50 55 60

Met Lys Glu Leu His Leu Ala Ile Pro Ala Lys Ile Thr Arg Glu 65 70 75

Lys Leu Asp Gln Val Ala Thr Ala Val Tyr Gln Met Met Asp Gln 80 85 90

Leu Tyr Gln Gly Lys Met Tyr Phe Pro Gly Tyr Phe Pro Asn Glu
95 100 105

Leu Arg Asn Ile Phe Arg Glu Gln Val His Leu Ile Gln Asn Ala 110 115 120

Ile Ile Glu Arg His Leu Ala Pro Gly Ser Trp Gly Gly Gl
n 125 130 135

Leu Ser Arg Glu Gly Pro Ser Leu Ala Pro Glu Gly Ser Met Pro

<210> 357

<211> 1536

<212> DNA

<213> Homo sapiens

<400> 357

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W mile

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<210> 358

<211> 273

<212> PRT

<213> Homo sapiens

<400> 358

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Thr Cys Glu Leu Ala Ala Glu Val Ala Ala Glu Val Glu Lys Ser

Ser Asp Gly Pro Gly Ala Ala Gln Glu Pro Thr Trp Leu Thr Asp

Val Pro Ala Ala Met Glu Phe Ile Ala Ala Thr Glu Val Ala Val

Ile Gly Phe Phe Gln Asp Leu Glu Ile Pro Ala Val Pro Ile Leu

His Ser Met Val Gln Lys Phe Pro Gly Val Ser Phe Gly Ile Ser

Thr Asp Ser Glu Val Leu Thr His Tyr Asn Ile Thr Gly Asn Thr

Ile Cys Leu Phe Arg Leu Val Asp Asn Glu Gln Leu Asn Leu Glu

Asp Glu Asp Ile Glu Ser Ile Asp Ala Thr Lys Leu Ser Arg Phe 135

Ile Glu Ile Asn Ser Leu His Met Val Thr Glu Tyr Asn Pro Val 140 145 150

Thr Val Ile Gly Leu Phe Asn Ser Val Ile Gln Ile His Leu Leu 155 165

Leu Ile Met Asn Lys Ala Ser Pro Glu Tyr Glu Glu Asn Met His 175

Arg Tyr Gln Lys Ala Ala Lys Leu Phe Gln Gly Lys Ile Leu Phe 185 195

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Ile Leu Val Asp Ser Gly Met Lys Glu Asn Gly Lys Val Ile Ser
  Phe Phe Lys Leu Lys Glu Ser Gln Leu Pro Ala Leu Ala Ile Tyr
                  215
                                                            225
  Gln Thr Leu Asp Asp Glu Trp Asp Thr Leu Pro Thr Ala Glu Val
                                       235
  Ser Val Glu His Val Gln Asn Phe Cys Asp Gly Phe Leu Ser Gly
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 Lys Leu Leu Lys Glu Asn Arg Glu Ser Glu Gly Lys Thr Pro Lys
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 Val Glu Leu
<210> 359
<211> 24
<212> DNA
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<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 359
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<210> 360
<211> 20
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<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-20
<223> Synthetic construct.
<400> 360
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<210> 361
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 361
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<210> 362

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<211> 50
<212> DNA
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<222> 1-50
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<210> 363
<211> 1777
<212> DNA
<213> Homo sapiens
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cctcagcggg gacccgggct cagggacgcg gcggcggcgg cggcgactgc 150
 agtggctgga cgatggcagc gtccgccgga gccggggcgg tgattgcagc 200
 cccagacage eggegetgge tgtggteggt getggeggeg gegettggge 250
 tcttgacagc tggagtatca gccttggaag tatatacgcc aaaagaaatc 300
 ttcgtggcaa atggtacaca agggaagctg acctgcaagt tcaagtctac 350
 tagtacgact ggcgggttga cctcagtctc ctggagcttc cagccagagg 400
 gggccgacac tactgtgtcg tttttccact actcccaagg gcaagtgtac 450
 cttgggaatt atccaccatt taaagacaga atcagctggg ctggagacct 500
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 cctggacaca ttaggctcta tgtcgtagaa aaagagaatt tgcctgtgtt 650
 tccagtttgg gtagtggtgg gcatagttac tgctgtggtc ctaggtctca 700
 ctctgctcat cagcatgatt ctggctgtcc tctatagaag gaaaaactct 750
 aaacgggatt acactggctg cagtacatca gagagtttqt caccagttaa 800
 gcaggctcct cggaagtccc cctccgacac tgagggtctt gtaaagagtc 850
 tgccttctgg atctcaccag ggcccagtca tatatgcaca gttagaccac 900
 tccggcggac atcacagtga caagattaac aagtcagagt ctgtggtgta 950
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tgcggatatc cgaaagaatt aagagaatac ctagaacata tcctcagcaa 1000

gaaacaaaac caaactggac tctcgtgcag aaaatgtagc ccattaccac 1050 atgtagcctt ggagacccag gcaaggacaa gtacacgtgt actcacagag 1100 ggagagaaag atgtgtacaa aggatatgta taaatattct atttagtcat 1150 cctgatatga ggagccagtg ttgcatgatg aaaagatggt atgattctac 1200 atatgtaccc attgtcttgc tgtttttgta ctttctttc aggtcattta 1250 caattgggag atttcagaaa cattcctttc accatcattt agaaatggtt 1300 tgccttaatg gagacaatag cagatcctgt agtatttcca gtagacatgg 1350 ccttttaatc taagggctta agactgatta gtcttagcat ttactgtagt 1400 tggaggatgg agatgctatg atggaagcat acccagggtg gcctttagca 1450 cagtatcagt accatttatt tgtctgccgc ttttaaaaaa tacccattgg 1500 ctatgccact tgaaaacaat ttgagaagtt tttttgaagt ttttctcact 1550 aaaatatggg gcaattgtta gccttacatg ttgtgtagac ttactttaag 1600 tttgcaccct tgaaatgtgt catatcaatt tctggattca taatagcaag 1650 attagcaaag gataaatgcc gaaggtcact tcattctqga cacagttgga 1700 tcaatactga ttaagtagaa aatccaagct ttgcttgaga acttttgtaa 1750 cgtggagagt aaaaagtatc ggtttta 1777

<210> 364

<211> 269

<212> PRT

<213> Homo sapiens

<400> 364

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Leu Thr Ala Gly Val Ser Ala Leu Glu Val Tyr Thr Pro Lys Glu 35 40 45

Ile Phe Val Ala Asn Gly Thr Gln Gly Lys Leu Thr Cys Lys Phe 50 55 60

Lys Ser Thr Ser Thr Thr Gly Gly Leu Thr Ser Val Ser Trp Ser
65 70 75

Phe Gln Pro Glu Gly Ala Asp Thr Thr Val Ser Phe Phe His Tyr 80 85 90

Ser Gln Gly Gln Val Tyr Leu Gly Asn Tyr Pro Pro Phe Lys Asp 95 100 105

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Arg Ile Ser Trp Ala Gly Asp Leu Asp Lys Lys Asp Ala Ser Ile
                 110
Asn Ile Glu Asn Met Gln Phe Ile His Asn Gly Thr Tyr Ile Cys
                 125
                                                         135
Asp Val Lys Asn Pro Pro Asp Ile Val Val Gln Pro Gly His Ile
                                                         150
Arg Leu Tyr Val Val Glu Lys Glu Asn Leu Pro Val Phe Pro Val
                                                         165
Trp Val Val Gly Ile Val Thr Ala Val Val Leu Gly Leu Thr
                 170
                                     175
                                                         180
Leu Leu Ile Ser Met Ile Leu Ala Val Leu Tyr Arg Arg Lys Asn
                                                         195
Ser Lys Arg Asp Tyr Thr Gly Cys Ser Thr Ser Glu Ser Leu Ser
                                     205
Pro Val Lys Gln Ala Pro Arg Lys Ser Pro Ser Asp Thr Glu Gly
                                     220
Leu Val Lys Ser Leu Pro Ser Gly Ser His Gln Gly Pro Val Ile
Tyr Ala Gln Leu Asp His Ser Gly Gly His His Ser Asp Lys Ile
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Asn Lys Ser Glu Ser Val Val Tyr Ala Asp Ile Arg Lys Asn
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<210> 365

<211> 1321

<212> DNA

<213> Homo sapiens

<400> 365

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cgaattgcta gcatcagcaa aagtctcacc atggttgctc ttgccaaatt 550 gtgggaaqca gggaaactgg atcttgatat tccagtacaa cattatgttc 600 ccgaattccc agaaaaagaa tatqaaqgtq aaaaggtttc tqtcacaaca 650 agattactga tttcccattt aagtggaatt cgtcattatg aaaaggacat 700 aaaaaaggtg aaagaagaga aagcttataa agccttgaag atgatgaaag 750 agaatgttgc atttgagcaa gaaaaagaag gcaaaagtaa tgaaaagaat 800 gattttacta aatttaaaac agagcaggag aatgaagcca aatgccggaa 850 ttcaaaacct ggcaagaaaa agaatgattt tgaacaaggc gaattatatt 900 tgagagaaaa gtttgaaaat tcaattgaat ccctaagatt atttaaaaat 950 gatcctttgt tcttcaaacc tggtagtcag tttttgtatt caacttttgg 1000 ctatacccta ctggcagcca tagtagagag agcttcagga tgtaaatatt 1050 tggactatat gcagaaaata ttccatgact tggatatgct gacgactgtg 1100 caggaagaaa acqaqccaqt qatttacaat aqaqcaaqqt aaatqaatac 1150 cttctgctgt gtctagctat atcqcatctt aacactattt tattaattaa 1200 aagtcaaatt ttctttgttt ccattccaaa atcaacctgc cacattttgg 1250 gagcttttct acatgtctgt tttctcatct gtaaagtgaa ggaagtaaaa 1300 catgtttata aagtaaaaaa a 1321

<210> 366

<211> 373

<212> PRT

<213> Homo sapiens

<400> 366

THE RESERVE OF THE PROPERTY OF

Met Tyr Arg Leu Leu Ser Ala Val Thr Ala Arg Ala Ala Pro $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Gly Gly Leu Ala Ser Ser Cys Gly Arg Arg Gly Val His Gln Arg 20 25 30

Ala Gly Leu Pro Pro Leu Gly His Gly Trp Val Gly Gly Leu Gly 35 40 45

Leu Gly Leu Gly Leu Ala Leu Gly Val Lys Leu Ala Gly Gly Leu 50 55 60

Arg Gly Ala Ala Pro Ala Gln Ser Pro Ala Ala Pro Asp Pro Glu
65 70 75

Ala Ser Pro Leu Ala Glu Pro Pro Gl
n Glu Gl
n Ser Leu Ala Pro 80 $\,$ 85 $\,$ 90

Trp Ser Pro Gln Thr Pro Ala Pro Pro Cys Ser Arg Cys Phe Ala Arg Ala Ile Glu Ser Ser Arg Asp Leu Leu His Arg Ile Lys Asp Glu Val Gly Ala Pro Gly Ile Val Val Gly Val Ser Val Asp Gly 135 Lys Glu Val Trp Ser Glu Gly Leu Gly Tyr Ala Asp Val Glu Asn Arg Val Pro Cys Lys Pro Glu Thr Val Met Arg Ile Ala Ser Ile Ser Lys Ser Leu Thr Met Val Ala Leu Ala Lys Leu Trp Glu Ala Gly Lys Leu Asp Leu Asp Ile Pro Val Gln His Tyr Val Pro Glu Phe Pro Glu Lys Glu Tyr Glu Gly Glu Lys Val Ser Val Thr Thr Arg Leu Leu Ile Ser His Leu Ser Gly Ile Arg His Tyr Glu Lys Asp Ile Lys Lys Val Lys Glu Glu Lys Ala Tyr Lys Ala Leu Lys Met Met Lys Glu Asn Val Ala Phe Glu Gln Glu Lys Glu Gly Lys Ser Asn Glu Lys Asn Asp Phe Thr Lys Phe Lys Thr Glu Gln Glu Asn Glu Ala Lys Cys Arg Asn Ser Lys Pro Gly Lys Lys Lys Asn 285 Asp Phe Glu Gln Gly Glu Leu Tyr Leu Arg Glu Lys Phe Glu Asn Ser Ile Glu Ser Leu Arg Leu Phe Lys Asn Asp Pro Leu Phe Phe 305 315 Lys Pro Gly Ser Gln Phe Leu Tyr Ser Thr Phe Gly Tyr Thr Leu 330 Leu Ala Ala Ile Val Glu Arg Ala Ser Gly Cys Lys Tyr Leu Asp 335 345 Tyr Met Gln Lys Ile Phe His Asp Leu Asp Met Leu Thr Thr Val Gln Glu Glu Asn Glu Pro Val Ile Tyr Asn Arg Ala Arg

<210> 367

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<222> 1-30
<223> Synthetic construct.
<400> 367
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<210> 368
<211> 25
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-25
<223> Synthetic construct.
<400> 368
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<210> 369
<211> 28
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-28
<223> Synthetic construct.
<400> 369
 aaaacctcag aacaactcat tttgcacc 28
<210> 370
<211> 41
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-41
<223> Synthetic construct.
<400> 370
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<210> 371
<211> 1150
<212> DNA
<213> Homo sapiens
<400> 371
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 ctggggcaac ccggctgctc ctgctcttgc tgatggcggt agcagcgccc 150
 agtcgagccc ggggcagcgg ctgccgggcc gggactggtg cgcgaggggc 200
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 tacaagettg attgaaatte actgeteact tgataegtta tteagaaace 1050
caaggaatgg ctgtccccat cctcatgtgg ctgtgtggag ctcagctgtg 1100
ttgtgtggca gtttattaaa ctgtccccca gatcgacacg caaaaaaaa 1150
<211> 269
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<210> 372

<212> PRT

<213> Homo sapiens

<400> 372

Met Ala Ala Ser Ala Gly Ala Thr Arg Leu Leu Leu Leu

Leu Met Ala Val Ala Ala Pro Ser Arg Ala Arg Gly Ser Gly Cys

Arg Ala Gly Thr Gly Ala Arg Gly Ala Gly Ala Glu Gly Arg Glu

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Glu Ile Asp Asp Ser Ala Asn Phe Arg Lys Arg Gly Ser Leu Leu
                                                          75
Trp Asn Gln Gln Asp Gly Thr Leu Ser Leu Ser Gln Arg Gln Leu
Ser Glu Glu Glu Arg Gly Arg Leu Arg Asp Val Ala Ala Leu Asn
                 95
                                    100
Gly Leu Tyr Arg Val Arg Ile Pro Arg Arg Pro Gly Ala Leu Asp
Gly Leu Glu Ala Gly Gly Tyr Val Ser Ser Phe Val Pro Ala Cys
Ser Leu Val Glu Ser His Leu Ser Asp Gln Leu Thr Leu His Val
                                                        150
Asp Val Ala Gly Asn Val Val Gly Val Ser Val Val Thr His Pro
Gly Gly Cys Arg Gly His Glu Val Glu Asp Val Asp Leu Glu Leu
                170
                                                        180
Phe Asn Thr Ser Val Gln Leu Gln Pro Pro Thr Thr Ala Pro Gly
                                                        195
Pro Glu Thr Ala Ala Phe Ile Glu Arg Leu Glu Met Glu Gln Ala
                                                        210
Gln Lys Ala Lys Asn Pro Gln Glu Gln Lys Ser Phe Phe Ala Lys
Tyr Trp Met Tyr Ile Ile Pro Val Val Leu Phe Leu Met Met Ser
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Gly Ala Pro Asp Thr Gly Gly Gln Gly Gly Gly Gly Gly Gly
Gly Gly Gly Ser Gly Leu Cys Cys Val Pro Pro Ser Leu
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<210> 373

<211> 1706

<212> DNA

<213> Homo sapiens

<400> 373

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ctctgtgtta ctcccattta gaaaataaac acttttaaat gatcaaaaaa 1700 aaaaaa 1706

<210> 374

<211> 450

<212> PRT

<213> Homo sapiens

<400> 374

Met Leu Val Thr Ala Tyr Leu Ala Phe Val Gly Leu Leu Ala Ser 1 5 10 15

Cys Leu Gly Leu Glu Leu Ser Arg Cys Arg Ala Lys Pro Pro Gly 20 25 30

Arg Ala Cys Ser Asn Pro Ser Phe Leu Arg Phe Gln Leu Asp Phe 35 40 45

Tyr Gln Val Tyr Phe Leu Ala Leu Ala Ala Asp Trp Leu Gln Ala 50 55 60

Pro Tyr Leu Tyr Lys Leu Tyr Gln His Tyr Tyr Phe Leu Glu Gly
65 70 75

Gln Ile Ala Ile Leu Tyr Val Cys Gly Leu Ala Ser Thr Val Leu 80 85 90

Phe Gly Leu Val Ala Ser Ser Leu Val Asp Trp Leu Gly Arg Lys 95 100 105

Asn Ser Cys Val Leu Phe Ser Leu Thr Tyr Ser Leu Cys Cys Leu
110 115 120

Thr Lys Leu Ser Gln Asp Tyr Phe Val Leu Leu Val Gly Arg Ala 125 130 135

Leu Gly Gly Leu Ser Thr Ala Leu Leu Phe Ser Ala Phe Glu Ala 140 145 150

Trp Tyr Ile His Glu His Val Glu Arg His Asp Phe Pro Ala Glu 155 160 165

Trp Ile Pro Ala Thr Phe Ala Arg Ala Ala Phe Trp Asn His Val 170 175 180

Leu Ala Val Val Ala Gly Val Ala Ala Glu Ala Val Ala Ser Trp
185 190 195

Ile Gly Leu Gly Pro Val Ala Pro Phe Val Ala Ala Ile Pro Leu 200 205 210

Leu Ala Leu Ala Gly Ala Leu Ala Leu Arg Asn Trp Gly Glu Asn 215 220 225

Tyr Asp Arg Gln Arg Ala Phe Ser Arg Thr Cys Ala Gly Gly Leu 230 235 240

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Arg Cys Leu Leu Ser Asp Arg Arg Val Leu Leu Leu Gly Thr Ile
Gln Ala Leu Phe Glu Ser Val Ile Phe Ile Phe Val Phe Leu Trp
                 260
                                                          270
Thr Pro Val Leu Asp Pro His Gly Ala Pro Leu Gly Ile Ile Phe
Ser Ser Phe Met Ala Ala Ser Leu Leu Gly Ser Ser Leu Tyr Arg
                                     295
Ile Ala Thr Ser Lys Arg Tyr His Leu Gln Pro Met His Leu Leu
                 305
                                                          315
Ser Leu Ala Val Leu Ile Val Val Phe Ser Leu Phe Met Leu Thr
                 320
                                                          330
Phe Ser Thr Ser Pro Gly Gln Glu Ser Pro Val Glu Ser Phe Ile
                                     340
                                                          345
Ala Phe Leu Leu Ile Glu Leu Ala Cys Gly Leu Tyr Phe Pro Ser
                                     355
Met Ser Phe Leu Arg Arg Lys Val Ile Pro Glu Thr Glu Gln Ala
                                     370
                                                         375
Gly Val Leu Asn Trp Phe Arg Val Pro Leu His Ser Leu Ala Cys
                380
                                     385
                                                         390
Leu Gly Leu Leu Val Leu His Asp Ser Asp Arg Lys Thr Gly Thr
                                     400
                                                         405
Arg Asn Met Phe Ser Ile Cys Ser Ala Val Met Val Met Ala Leu
                                     415
Leu Ala Val Val Gly Leu Phe Thr Val Val Arg His Asp Ala Glu
                                     430
Leu Arg Val Pro Ser Pro Thr Glu Glu Pro Tyr Ala Pro Glu Leu
                                     445
                                                         450
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<210> 375

<211> 1098

<212> DNA

<213> Artificial

<400> 375

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cettgteece getgaacete cagaggeetg eggggaacte ageaacggtt 300 tcttcatcca ggaccagatt gctctggtgg agagggggg ctgctccttc 350 ctctccaaga ctcgggtggt ccaggagcac ggcgggcggg cggtgatcat 400 ctctgacaac gcagttgaca atgacagctt ctacgtggag atgatccagg 450 acagtaccca gcgcacagct gacatccccg ccctcttcct gctcggccga 500 gacggctaca tgatccgccg ctctctggaa cagcatgggc tgccatgggc 550 catcatttcc atcccagtca atgtcaccag catccccacc tttgagctgc 600 tgcaaccgcc ctggaccttc tggtagaaga gtttgtccca cattccagcc 650 ataagtgact ctgagctggg aaggggaaac ccaggaattt tgctacttgg 700 aatttggaga tagcatctgg ggacaagtgg agccaggtag aggaaaaggg 750 cccagggccc ccaagggtgt ctcatgctac aagaagaggc aagagacagg 850 ccccagggct tctggctaga acccgaaaca aaaggagctg aaggcaggtg 900 gcctgagagc catctgtgac ctgtcacact cacctggctc cagcctcccc 950 tacccagggt ctctgcacag tgaccttcac agcagttgtt ggagtggttt 1000 aaagagctgg tgtttgggga ctcaataaac cctcactgac tttttagcaa 1050 taaagcttct catcagggtt gcaaaaaaaa aaaaaaaaa aaaaaaaa 1098

<210> 376

<211> 188

<212> PRT

<213> Homo sapiens

<400> 376

Met Val Pro Gly Ala Ala Gly Trp Cys Cys Leu Val Leu Trp Leu 1 5 10 15

Pro Ala Cys Val Ala Ala His Gly Phe Arg Ile His Asp Tyr Leu 20 25 30

Tyr Phe Gln Val Leu Ser Pro Gly Asp Ile Arg Tyr Ile Phe Thr 35 40 45

Ala Thr Pro Ala Lys Asp Phe Gly Gly Ile Phe His Thr Arg Tyr 50 55 60

Glu Gln Ile His Leu Val Pro Ala Glu Pro Pro Glu Ala Cys Gly
65 70 75

Glu Leu Ser Asn Gly Phe Phe Ile Gln Asp Gln Ile Ala Leu Val $80 \\ 85 \\ 90$

```
Glu Arg Gly Gly Cys Ser Phe Leu Ser Lys Thr Arg Val Val Gln
 Glu His Gly Gly Arg Ala Val Ile Ile Ser Asp Asn Ala Val Asp
                110
                                  115
 Asn Asp Ser Phe Tyr Val Glu Met Ile Gln Asp Ser Thr Gln Arg
 Thr Ala Asp Ile Pro Ala Leu Phe Leu Leu Gly Arg Asp Gly Tyr
                                                     150
 Met Ile Arg Arg Ser Leu Glu Gln His Gly Leu Pro Trp Ala Ile
 Ile Ser Ile Pro Val Asn Val Thr Ser Ile Pro Thr Phe Glu Leu
                170
 Leu Gln Pro Pro Trp Thr Phe Trp
                185
<210> 377
<211> 496
<212> DNA
<213> Artificial
<220>
<221> unsure
<222> 396
<223> unknown base
<400> 377
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 ggctggtggt gatggctggt gtgattccaa tccagggcgg gatcctgaac 100
 ctgaacaaga tggtcaagca agtgactggg aaaatgccca tcctctccta 150
 ctggccctac ggctgtcact gcggactagg tggcagaggc caacccaaag 200
 atgccacgga ctggtgctgc cagacccatg actgctgcta tgaccacctg 250
 aagacccagg ggtgcggcat ctacaaggac aacaacaaaa gcagcataca 300
ttgtatggat ttatctcaac gctattgttt aatggctgtg tttaatgtga 350
 tctatctgga aaatgaggac tccgaataaa aagctattac tawttnaaaa 400
<210> 378
<211> 116
<212> PRT
<213> Homo sapiens
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359

<400> 378

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Met Glu Leu Ala Leu Cys Gly Leu Val Val Met Ala Gly Val
  Ile Pro Ile Gln Gly Gly Ile Leu Asn Leu Asn Lys Met Val Lys
 Gln Val Thr Gly Lys Met Pro Ile Leu Ser Tyr Trp Pro Tyr Gly
 Cys His Cys Gly Leu Gly Gly Arg Gly Gln Pro Lys Asp Ala Thr
 Asp Trp Cys Cys Gln Thr His Asp Cys Cys Tyr Asp His Leu Lys
 Thr Gln Gly Cys Gly Ile Tyr Lys Asp Asn Asn Lys Ser Ser Ile
 His Cys Met Asp Leu Ser Gln Arg Tyr Cys Leu Met Ala Val Phe
 Asn Val Ile Tyr Leu Glu Asn Glu Asp Ser Glu
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<210> 379
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 379
 ctgcctccac tgctctgtgc tggg 24
<210> 380
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 380
cagagcagtg gatgttcccc tggg 24
<210> 381
<211> 45
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-45
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<223> Synthetic construct.
 <400> 381
 ctgaacaaga tggtcaagca agtgactggg aaaatgccca tcctc 45
<210> 382
<211> 764
<212> DNA
<213> Homo sapiens
<400> 382
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 ggcgatgtgg agggtgcccg gcacaaccag acgcccagtc acaggcgaga 100
 gccctgggat gcaccggcca gaggccatgc tgctgctgct cacgcttgcc 150
 ctcctggggg gccccacctg ggcagggaag atgtatggcc ctggaggagg 200
 caagtatttc agcaccactg aagactacga ccatgaaatc acagggctgc 250
 gggtgtctgt aggtcttctc ctggtgaaaa gtgtccaggt gaaacttgga 300
 gactcctggg acgtgaaact gggagcctta ggtgggaata cccaggaagt 350
 caccetgeag ceaggegaat acateacaaa agtetttgte geetteeaag 400
 ctttcctccg gggtatggtc atgtacacca gcaaggaccg ctatttctat 450
 tttgggaagc ttgatggcca gatctcctct gcctacccca gccaagaggg 500
 gcaggtgctg gtgggcatct atggccagta tcaactcctt ggcatcaaga 550
 gcattggctt tgaatggaat tatccactag aggagccgac cactgagcca 600
 ccagttaatc tcacatactc agcaaactca cccgtgggtc gctagggtgg 650
 ggtatggggc catccgagct gaggccatct gtgtggtggt ggctgatggt 700
 actggagtaa ctgagtcggg acgctgaatc tgaatccacc aataaataaa 750
 gcttctgcag aaaa 764
<210> 383
<211> 178
<212> PRT
<213> Homo sapiens
<400> 383
Met His Arg Pro Glu Ala Met Leu Leu Leu Leu Thr Leu Ala Leu
  1
Leu Gly Gly Pro Thr Trp Ala Gly Lys Met Tyr Gly Pro Gly Gly
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Gly Lys Tyr Phe Ser Thr Thr Glu Asp Tyr Asp His Glu Ile Thr

```
        Gly
        Leu
        Arg
        Val
        Ser
        Val
        Gly
        Leu
        Leu
        Leu
        Val
        Lys
        Ser
        Val
        Leu
        Gly
        Asp
        Asp
        Val
        Lys
        Leu
        Gly
        Ala
        Leu
        Gly
        Asp
        Asp
        Val
        Lys
        Leu
        Gly
        Ala
        Leu
        Asp
        Asp</th
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<210> 384

<211> 2379

<212> DNA

<213> Homo sapiens

<400> 384

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agetetgtgg etgaactggg tgeteateae gggaactget gggetatgga 100
atacagatgt ggcageteag gtageceeaa attgeetgga agaatacate 150
atgtttteg ataagaagaa attgtaggat ecagttttt ttttaacege 200
ceecteecaa ecececaaaa aaactgtaaa gatgcaaaaa egtaatatee 250
atgaagatee tattacetag gaagattttg atgtttget gegaatgegg 300
tgttgggatt tattgttet tggagtgtte tgegtggetg geaaagaata 350
atgteeagaa ecetgaeta etaeagtgea getgaeaggg getgteatge 450
acctggeee taageeaaag eaaaagaeet aaggaegae tetagetgtag 550
accatggttat ageeeceat gtettaetga eaatgettte ttetgeegaa 600
eggaggatgee etaagggetg taaggtgtaa ggeaaaatgg tatattgtga 650

atctcagaaa ttacaggaga taccctcaag tatatctgct ggttgcttag 700 gtttgtccct tcgctataac agccttcaaa aacttaagta taatcaattt 750 aaagggetea accageteae etggetatae ettgaecata accatateag 800 caatattgac gaaaatgctt ttaatggaat acgcagactc aaagagctga 850 ttcttagttc caatagaatc tcctattttc ttaacaatac cttcagacct 900 gtgacaaatt tacggaactt ggatctgtcc tataatcagc tgcattctct 950 gggatctgaa cagtttcggg gcttgcggaa gctgctgagt ttacatttac 1000 ggtctaactc cctgagaacc atccctgtgc gaatattcca agactgccgc 1050 aacctggaac ttttggacct gggatataac cggatccgaa gtttagccag 1100 gaatgtettt getggeatga teagaeteaa agaaetteae etggageaea 1150 atcaattttc caagetcaae etggeeettt ttecaaggtt ggteageett 1200 cagaaccttt acttgcagtg gaataaaatc agtgtcatag gacagaccat 1250 gtcctggacc tggagctcct tacaaaggct tgatttatca ggcaatgaga 1300 tcgaagcttt cagtggaccc agtgttttcc agtgtgtccc gaatctgcag 1350 cgcctcaacc tggattccaa caagctcaca tttattggtc aagagatttt 1400 ggattcttgg atatccctca atgacatcag tcttgctggg aatatatggg 1450 aatgcagcag aaatatttgc tcccttgtaa actggctgaa aagttttaaa 1500 ggtctaaggg agaatacaat tatctgtgcc agtcccaaag agctgcaagg 1550 agtaaatgtg atcgatgcag tgaagaacta cagcatctgt ggcaaaagta 1600 ctacagagag gtttgatctg gccagggctc tcccaaagcc gacgtttaag 1650 cccaagetee ecaggeegaa geatgagage aaaceceett tgcccccgae 1700 ggtgggagcc acagagcccg gcccagagac cgatgctgac gccgagcaca 1750 tctctttcca taaaatcatc gcgggcagcg tggcgctttt cctgtccgtg 1800 ctcgtcatcc tgctggttat ctacgtgtca tggaagcggt accctgcgag 1850 catgaagcag ctgcagcagc gctccctcat gcgaaggcac aggaaaaaga 1900 aaagacagtc cctaaagcaa atgactccca gcacccagga attttatgta 1950 gattataaac ccaccaacac ggagaccagc gagatgctgc tgaatgggac 2000 gggaccctgc acctataaca aatcgggctc cagggagtgt gaggtatgaa 2050 ccattgtgat aaaaagagct cttaaaagct gggaaataag tggtgcttta 2100

ttgaactctg gtgactatca agggaacgcg atgcccccc tccccttccc 2150 tctccctctc actttggtgg caagatcctt ccttgtccgt tttagtgcat 2200 tcataatact ggtcattttc ctctcataca taatcaaccc attgaaattt 2250 aaataccaca atcaatgtga agcttgaact ccggtttaat ataataccta 2300 ttgtataaga ccctttactg attccattaa tgtcgcattt gttttaagat 2350 aaaacttctt tcataggtaa aaaaaaaaa 2379

<210> 385

<211> 513

<212> PRT

<213> Homo sapiens

<400> 385

Met Gly Phe Asn Val Ile Arg Leu Leu Ser Gly Ser Ala Val Ala 1 5 10 15

Leu Val Ile Ala Pro Thr Val Leu Leu Thr Met Leu Ser Ser Ala 20 25 30

Glu Arg Gly Cys Pro Lys Gly Cys Arg Cys Glu Gly Lys Met Val 35 40 45

Tyr Cys Glu Ser Gln Lys Leu Gln Glu Ile Pro Ser Ser Ile Ser 50 55 60

Ala Gly Cys Leu Gly Leu Ser Leu Arg Tyr Asn Ser Leu Gln Lys
65 70 75

Leu Lys Tyr Asn Gln Phe Lys Gly Leu Asn Gln Leu Thr Trp Leu 80 85 90

Tyr Leu Asp His Asn His Ile Ser Asn Ile Asp Glu Asn Ala Phe 95 100 105

Asn Gly Ile Arg Arg Leu Lys Glu Leu Ile Leu Ser Ser Asn Arg 110 115 120

Ile Ser Tyr Phe Leu Asn Asn Thr Phe Arg Pro Val Thr Asn Leu 125 130 135

Arg Asn Leu Asp Leu Ser Tyr Asn Gln Leu His Ser Leu Gly Ser 140 145 150

Glu Gln Phe Arg Gly Leu Arg Lys Leu Leu Ser Leu His Leu Arg 155 160 165

Ser Asn Ser Leu Arg Thr Ile Pro Val Arg Ile Phe Gln Asp Cys

Arg Asn Leu Glu Leu Leu Asp Leu Gly Tyr Asn Arg Ile Arg Ser 185 190 195

Leu Ala Arg Asn Val Phe Ala Gly Met Ile Arg Leu Lys Glu Leu

				200	1				205	j.				210
His	Leu	ı Glu	His	Asn 215		Phe	e Ser	Lys	Leu 220		Lei	ı Ala	a Leu	Phe 225
Pro	Arg	Leu	ı Val	Ser 230	Leu	Glm	Asn	Leu	Tyr 235		Glr	n Trp	Asr	Lys 240
Ile	Ser	Val	Ile	Gly 245	Gln	Thr	Met	: Ser	Trp 250		Trp	Ser	Ser	Leu 255
Gln	Arg	Leu	Asp	Leu 260	Ser	Gly	Asn	Glu	11e 265		. Ala	a Phe	ser	Gly 270
Pro	Ser	Val	Phe	Gln 275	Cys	Val	Pro	Asn	Leu 280		Arg	, Leu	Asn	Leu 285
				290					295					Ser 300
Trp	Ile	Ser	Leu	Asn 305	Asp	Ile	Ser	Leu	Ala 310	Gly	Asn	Ile	Trp	Glu 315
				320					325					Phe 330
				335					340					Glu 345
			Val	350					355					360
			Ser	365					370					375
			Thr	380					385					390
			Pro	395					400					405
			Asp	410					415					420
			Ser	425					430					Leu 435
			Tyr	440					445					Lys 450
			Gln	455					460					Lys 465
			Leu	470					475					480
va⊥	Asp	туr	Lys	Pro 485	Thr	Asn	Thr	Glu	Thr 490	Ser	Glu	Met	Leu	Leu 495

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                                       505
 Cys Glu Val
<210> 386
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 386
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<210> 387
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 387
 ggtccccagg acatggtctg tccc 24
<210> 388
<211> 48
<212> DNA
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<222> 1-48
<223> Synthetic construct.
<400> 388
 gctgagttta catttacggt ctaactccct gagaaccatc cctgtgcg 48
<210> 389
<211> 1449
<212> DNA
<213> Homo sapiens
<400> 389
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ttgactgtcc tttaaatatg tcaagatcca gacttttcag tgtcacctca 100
gcgatctcaa cgatagggat cttgtgtttg ccgctattcc agttggtgct 150
ctcggaccta ccatgcgaag aagatgaaat gtgtgtaaat tataatgacc 200
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aacaccctaa tggctggtat atctggatcc tcctgctgct ggttttggtg 250
 gcagctcttc tctgtggagc tgtggtcctc tgcctccagt gctggctgag 300
 gagaccccga attgattctc acaggcgcac catggcagtt tttgctgttg 350
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 atgttttggc cctttaggct ccccacctcc atatgaagaa attgtaaaaa 500
 caacctgatt ttaggtgtgg attatcaatt taaagtatta acgacatctg 550
 taattccaaa acatcaaatt taggaatagt tatttcagtt gttggaaatg 600
 tccagagatc tattcatata gtctgaggaa ggacaattcg acaaaagaat 650
 ggatgttgga aaaaattttg gtcatggaga tgtttaaata gtaaagtagc 700
 aggettttga tgtgteactg etgtateata ettttatget acacaaceaa 750
 attaatgctt ctccactagt atccaaacag gcaacaatta ggtgctggaa 800
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 agatagtatt tgaatgaagg tgaggggaga gagtaggaaa aagaaaagtt 1000
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 gtctcagcaa aaacaagagg ttttatgccc caacctgaag aggaagaaat 1100
 tgtagataga aggtgaagga gattgctgaa gatatagagc acatataatg 1150
 ccaacacggg gagaaaagaa aatttcccct tttacagtaa tgaatgtggc 1200
 ctccatagtc catagtgttt ctctggagcc tcagggcttg gcatttattg 1250
 cagcatcatg ctaagaacct tcggcatagg tatctgttcc catgaggact 1300
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<210> 390
<211> 146
<212> PRT
<213> Homo sapiens
<400> 390
Met Ser Arg Ser Arg Leu Phe Ser Val Thr Ser Ala Ile Ser Thr
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³⁶⁷

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Ile Gly Ile Leu Cys Leu Pro Leu Phe Gln Leu Val Leu Ser Asp
  Leu Pro Cys Glu Glu Asp Glu Met Cys Val Asn Tyr Asn Asp Gln
  His Pro Asn Gly Trp Tyr Ile Trp Ile Leu Leu Leu Leu Val Leu
 Val Ala Ala Leu Leu Cys Gly Ala Val Val Leu Cys Leu Gln Cys
 Trp Leu Arg Arg Pro Arg Ile Asp Ser His Arg Arg Thr Met Ala
 Val Phe Ala Val Gly Asp Leu Asp Ser Ile Tyr Gly Thr Glu Ala
 Ala Val Ser Pro Thr Val Gly Ile His Leu Gln Thr Gln Thr Pro
                                      115
 Asp Leu Tyr Pro Val Pro Ala Pro Cys Phe Gly Pro Leu Gly Ser
                                      130
 Pro Pro Pro Tyr Glu Glu Ile Val Lys Thr Thr
<210> 391
<211> 26
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-26
<223> Synthetic construct.
<400> 391
 cttttcagtg tcacctcagc gatctc 26
<210> 392
<211> 23
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-23
<223> Synthetic construct.
<400> 392
ccaaaacatg gagcaggaac agg 23
<210> 393
<211> 47
<212> DNA
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<213> Artificial

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<220>
<221> Artificial Sequence
<222> 1-47
<223> Synthetic construct.
<400> 393
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<210> 394
<211> 2340
<212> DNA
<213> Homo sapiens
<400> 394
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<213> Homo sapiens
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His Tyr Thr Phe Gln Gln Pro Arg His Gln Ser Ser Val Lys Leu 35 40 45

Arg Glu Gln Ile Leu Asp Leu Ser Lys Arg Tyr Val Lys Ala Leu
50 55 60

Ala Glu Glu Asn Lys Asn Thr Val Asp Val Glu Asn Gly Ala Ser 65 70 75

Met Ala Gly Tyr Ala Asp Leu Lys Arg Thr Ile Ala Val Leu Leu 80 85 90

Asp Asp Ile Leu Gln Arg Leu Val Lys Leu Glu Asn Lys Val Asp 95 100 105

Tyr Ile Val Val Asn Gly Ser Ala Ala Asn Thr Thr Asn Gly Thr 110 115 120

Ser Gly Asn Leu Val Pro Val Thr Thr Asn Lys Arg Thr Asn Val 125 130 135

Ser Gly Ser Ile Arg 140

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<211> 2639

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<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

<400> 397

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Phe Gly Leu Phe Asp Ser Phe Ser Leu Thr Arg Val Asp Cys Ser 35 40 45

Gly Leu Gly Pro His Ile Met Pro Val Pro Ile Pro Leu Asp Thr
50 55 60

Ala His Leu Asp Leu Ser Ser Asn Arg Leu Glu Met Val Asn Glu 65 70 75

Ser Val Leu Ala Gly Pro Gly Tyr Thr Thr Leu Ala Gly Leu Asp 80 85 90

Leu Ser His Asn Leu Leu Thr Ser Ile Ser Pro Thr Ala Phe Ser 95 100 105

Arg Leu Arg Tyr Leu Glu Ser Leu Asp Leu Ser His Asn Gly Leu 110 115 120

Thr Ala Leu Pro Ala Glu Ser Phe Thr Ser Ser Pro Leu Ser Asp 125 130 135

Val Asn Leu Ser His Asn Gln Leu Arg Glu Val Ser Val Ser Ala 140 145 150

<211> 23 <212> DNA

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 Leu His Ala Val Pro Asn Leu Arg Asp Leu Pro Leu Arg Tyr Leu
 Ser Leu Asp Gly Asn Pro Leu Ala Val Ile Gly Pro Gly Ala Phe
 Ala Gly Leu Gly Gly Leu Thr His Leu Ser Leu Ala Ser Leu Gln
                                                          240
 Arg Leu Pro Glu Leu Ala Pro Ser Gly Phe Arg Glu Leu Pro Gly
                                                          255
 Leu Gln Val Leu Asp Leu Ser Gly Asn Pro Lys Leu Asn Trp Ala
 Gly Ala Glu Val Phe Ser Gly Leu Ser Ser Leu Gln Glu Leu Asp
                                                          285
 Leu Ser Gly Thr Asn Leu Val Pro Leu Pro Glu Ala Leu Leu Leu
 His Leu Pro Ala Leu Gln Ser Val Ser Val Gly Gln Asp Val Arg
                                      310
                                                          315
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 Ser Ser Pro Lys Val Pro Leu His Cys Val Asp Thr Arg Glu Ser
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<211> 1571
<212> DNA
<213> Homo sapiens
<400> 401
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<400> 402

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Thr Cys Trp Ala Leu Thr Ala Glu Pro Gly Trp Gly Gln Asn Lys 35 40 45

Gly Ala Thr Thr Cys Ala Thr Asn Ser His Ser Asp Ser Glu Leu
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<211> 261

<212> PRT

<213> Homo sapiens

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 Gly Ser Val Gln Ala Lys Asp Gly Asn Ile Asp Ile Arg Ile Leu
 Arg Arg Thr Glu Ser Leu Gln Asp Thr Lys Pro Ala Asn Arg Cys
 Cys Leu Leu Arg His Leu Leu Arg Leu Tyr Leu Asp Arg Val Phe
                                      175
 Lys Asn Tyr Gln Thr Pro Asp His Tyr Thr Leu Arg Lys Ile Ser
 Ser Leu Ala Asn Ser Phe Leu Thr Ile Lys Lys Asp Leu Arg Leu
 Ser His Ala His Met Thr Cys His Cys Gly Glu Glu Ala Met Lys
 Lys Tyr Ser Gln Ile Leu Ser His Phe Glu Lys Leu Glu Pro Gln
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<222> 1-28
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<210> 406
<211> 323
<212> PRT
<213> Homo sapiens
<400> 406
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<210> 407

<211> 31 <212> DNA

<213> Artificial

<220>

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<222> 1-31

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<210> 408

<211> 34

<212> DNA

<213> Artificial

<220>

<221> Artificial Sequence

<222> 1-34

<223> Synthetic construct.

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<210> 409

<211> 1487

<212> DNA

<213> Homo sapiens

<400> 409

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- <211> 158
- <212> PRT
- <213> Homo sapiens
- <400> 410
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- Ile Asp Trp Ser Glu Arg Arg Asn Ala Val Ala Ser Val Val Ala 20 25 30
- Gly Ile Leu Phe Phe Thr Gly Trp Trp Ile Met Ile Asp Ala Ala 35 40 45
- Val Val Tyr Pro Lys Pro Glu Gln Leu Asn His Ala Phe His Thr
 50 55 60
- Cys Gly Val Phe Ser Thr Leu Ala Phe Phe Met Ile Asn Ala Val 65 70 75

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Ser Asn Ala Gln Val Arg Gly Asp Ser Tyr Glu Ser Gly Cys Leu
  Gly Arg Thr Gly Ala Arg Val Trp Leu Phe Ile Gly Phe Met Leu
  Met Phe Gly Ser Leu Ile Ala Ser Met Trp Ile Leu Phe Gly Ala
  Tyr Val Thr Gln Asn Thr Asp Val Tyr Pro Gly Leu Ala Val Phe
 Phe Gln Asn Ala Leu Ile Phe Phe Ser Thr Leu Ile Tyr Lys Phe
 Gly Arg Thr Glu Glu Leu Trp Thr
<210> 411
<211> 20
<212> DNA
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<222> 1-20
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<210> 412
<211> 20
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<220>
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<222> 1-20
<223> Synthetic construct.
<400> 412
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<210> 413
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<221> Artificial Sequence
<222> 1-40
<223> Synthetic construct.
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<211> 1337 <212> DNA

<213> Homo sapiens

<400> 414 gttgatggca aacttcctca aaggagggc agagcctgcg cagggcagga 50 gcagctggcc cactggcggc ccgcaacact ccgtctcacc ctctgggccc 100 actgcatcta gaggagggcc gtctgtgagg ccactacccc tccagcaact 150 gggaggtggg actgtcagaa gctggcccag ggtggtggtc agctgggtca 200 gggacctacg gcacctgctg gaccacctcg ccttctccat cgaagcaggg 250 aagtgggagc ctcgagccct cgggtggaag ctgaccccaa gccacccttc 300 acctggacag gatgagagtg tcaggtgtgc ttcgcctcct ggccctcatc 350 tttgccatag tcacgacatg gatgtttatt cgaagctaca tgagcttcag 400 catgaaaacc atccgtctgc cacgctggct ggcagcctcg cccaccaagg 450 agatecaggt taaaaagtac aagtgtggee teatcaagee etgeecagee 500 aactactttg cgtttaaaat ctgcagtggg gccgccaacg tcgtgggccc 550 tactatgtgc tttgaagacc gcatgatcat gagtcctgtg aaaaacaatg 600 tgggcagagg cctaaacatc gccctggtga atggaaccac gggagctgtg 650 ctgggacaga aggcatttga catgtactct ggagatgtta tgcacctagt 700 gaaattcctt aaagaaattc cggggggtgc actggtgctg gtggcctcct 750 acgacgatcc agggaccaaa atgaacgatg aaagcaggaa actcttctct 800 gacttgggga gttcctacgc aaaacaactg ggcttccggg acagctgggt 850 cttcatagga gccaaagacc tcaggggtaa aagccccttt gagcagttct 900 taaagaacag cccagacaca aacaaatacg agggatggcc agagctgctg 950 gagatggagg gctgcatgcc cccgaagcca ttttagggtg gctgtggctc 1000 ttcctcagcc aggggcctga agaagctcct gcctgactta ggagtcagag 1050 cccggcaggg gctgaggagg aggagcaggg ggtgctqcgt qqaaqqtqct 1100 gcaggtcctt gcacgctgtg tcgcgcctct cctcctcgga aacagaaccc 1150 tcccacagca catcctaccc ggaagaccag cctcagaggg tccttctgga 1200 accagetgte tgtggagaga atggggtget ttegteaggg actgetgaeg 1250 gctggtcctg aggaaggaca aactgcccag acttgagccc aattaaattt 1300 tatttttgct ggttttgaaa aaaaaaaaa aaaaaaa 1337

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<210> 415
<211> 224
<212> PRT
<213> Homo sapiens
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 Ile Val Thr Trp Met Phe Ile Arg Ser Tyr Met Ser Phe Ser
 Met Lys Thr Ile Arg Leu Pro Arg Trp Leu Ala Ala Ser Pro Thr
 Lys Glu Ile Gln Val Lys Lys Tyr Lys Cys Gly Leu Ile Lys Pro
 Cys Pro Ala Asn Tyr Phe Ala Phe Lys Ile Cys Ser Gly Ala Ala
 Asn Val Val Gly Pro Thr Met Cys Phe Glu Asp Arg Met Ile Met
 Ser Pro Val Lys Asn Asn Val Gly Arg Gly Leu Asn Ile Ala Leu
 Val Asn Gly Thr Thr Gly Ala Val Leu Gly Gln Lys Ala Phe Asp
 Met Tyr Ser Gly Asp Val Met His Leu Val Lys Phe Leu Lys Glu
 Ile Pro Gly Gly Ala Leu Val Leu Val Ala Ser Tyr Asp Asp Pro
 Gly Thr Lys Met Asn Asp Glu Ser Arg Lys Leu Phe Ser Asp Leu
 Gly Ser Ser Tyr Ala Lys Gln Leu Gly Phe Arg Asp Ser Trp Val
 Phe Ile Gly Ala Lys Asp Leu Arg Gly Lys Ser Pro Phe Glu Gln
 Phe Leu Lys Asn Ser Pro Asp Thr Asn Lys Tyr Glu Gly Trp Pro
 Glu Leu Leu Glu Met Glu Gly Cys Met Pro Pro Lys Pro Phe
                 215
<210> 416
<211> 21
<212> DNA
<213> Artificial
<220>
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<221> Artificial Sequence

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<222> 1-21
<223> Synthetic construct.
<400> 416
 gccatagtca cgacatggat g 21
<210> 417
<211> 18
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-18
<223> Synthetic construct.
<400> 417
 ggatggccag agctgctg 18
<210> 418
<211> 26
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-26
<223> Synthetic construct.
<400> 418
 aaagtacaag tgtggcctca tcaagc 26
<210> 419
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 419
tctgactcct aagtcaggca ggag 24
<210> 420
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 420
attctctcca cagacagctg gttc 24
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<210> 421
<211> 46
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-46
<223> Synthetic construct.
<400> 421
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<210> 422
<211> 1701
<212> DNA
<213> Homo sapiens
<220>
<221> unsure
<222> 1528
<223> unknown base
<400> 422
 gagactgcag agggagataa agagagagg caaagaggca gcaagagatt 50
 tgtcctgggg atccagaaac ccatgatacc ctactgaaca ccgaatcccc 100
tggaagccca cagagacaga gacagcaaga gaagcagaga taaatacact 150
cacgccagga gctcgctcgc tctctctc tctctctcac tcctccctcc 200
ctctctct gcctgtccta gtcctctagt cctcaaattc ccagtcccct 250
gcaccccttc ctgggacact atgttgttct ccgccctcct gctggaggtg 300
atttggatcc tggctgcaga tgggggtcaa cactggacgt atgagggccc 350
acatggtcag gaccattggc cagcctctta ccctgagtgt ggaaacaatg 400
cccagtcgcc catcgatatt cagacagaca gtgtgacatt tgaccctgat 450
ttgcctgctc tgcagcccca cggatatgac cagcctggca ccgagccttt 500
ggacctgcac aacaatggcc acacagtgca actctctctg ccctctaccc 550
tgtatctggg tggacttccc cgaaaatatg tagctgccca gctccacctg 600
cactggggtc agaaaggatc cccagggggg tcagaacacc agatcaacag 650
tgaagccaca tttgcagagc tccacattgt acattatgac tctgattcct 700
atgacagett gagtgagget getgagagge etcagggeet ggetgteetg 750
ggcatcctaa ttgaggtggg tgagactaag aatatagctt atgaacacat 800
tetgagteae ttgcatgaag teaggeataa agateagaag aceteagtge 850
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ctcccttcaa cctaagagag ctgctcccca aacagctggg gcagtacttc 900 cgctacaatg gctcgctcac aactccccct tgctaccaga gtgtgctctg 950 gacagttttt tatagaaggt cccagatttc aatggaacag ctggaaaagc 1000 ttcaggggac attgttctcc acagaagagg agccctctaa gcttctggta 1050 cagaactacc gagcccttca gcctctcaat cagcgcatgg tctttgcttc 1100 tttcatccaa gcaggatcct cgtataccac aggtgaaatg ctgagtctag 1150 gtgtaggaat cttggttggc tgtctctgcc ttctcctggc tgtttatttc 1200 attgctagaa agattcggaa gaagaggctg gaaaaccgaa agagtgtggt 1250 cttcacctca gcacaagcca cgactgaggc ataaattcct tctcagatac 1300 catggatgtg gatgacttcc cttcatgcct atcaggaagc ctctaaaatg 1350 gggtgtagga tctggccaga aacactgtag gagtagtaag cagatgtcct 1400 cetteceetg gaeatetett agagaggaat ggaeceagge tgteatteea 1450 ggaagaactg cagagcette ageeteteea aacatgtagg aggaaatgag 1500 gaaatcgctg tgttgttaat gcagaganca aactctgttt agttgcaggg 1550 gaagtttggg atatacccca aagtcctcta cccctcact tttatggccc 1600 tttccctaga tatactgcgg gatctctcct taggataaag agttgctgtt 1650 gaagttgtat atttttgatc aatatatttg gaaattaaag tttctgactt 1700 t 1701

<210> 423

<211> 337

<212> PRT

<213> Homo sapiens

<400> 423

Met Leu Phe Ser Ala Leu Leu Leu Glu Val Ile Trp Ile Leu Ala 1 5 10 15

Ala Asp Gly Gln His Trp Thr Tyr Glu Gly Pro His Gly Gln 20 25 30

Asp His Trp Pro Ala Ser Tyr Pro Glu Cys Gly Asn Asn Ala Gln 35 40 45

Ser Pro Ile Asp Ile Gln Thr Asp Ser Val Thr Phe Asp Pro Asp 50 55 60

Leu Pro Ala Leu Gln Pro His Gly Tyr Asp Gln Pro Gly Thr Glu 65 70 75

Pro Leu Asp Leu His Asn Asn Gly His Thr Val Gln Leu Ser Leu

80 90 85 Pro Ser Thr Leu Tyr Leu Gly Gly Leu Pro Arg Lys Tyr Val Ala Ala Gln Leu His Leu His Trp Gly Gln Lys Gly Ser Pro Gly Gly Ser Glu His Gln Ile Asn Ser Glu Ala Thr Phe Ala Glu Leu His Ile Val His Tyr Asp Ser Asp Ser Tyr Asp Ser Leu Ser Glu Ala Ala Glu Arg Pro Gln Gly Leu Ala Val Leu Gly Ile Leu Ile Glu Val Gly Glu Thr Lys Asn Ile Ala Tyr Glu His Ile Leu Ser His 175 Leu His Glu Val Arg His Lys Asp Gln Lys Thr Ser Val Pro Pro Phe Asn Leu Arg Glu Leu Leu Pro Lys Gln Leu Gly Gln Tyr Phe Arg Tyr Asn Gly Ser Leu Thr Thr Pro Pro Cys Tyr Gln Ser Val Leu Trp Thr Val Phe Tyr Arg Arg Ser Gln Ile Ser Met Glu Gln 235 Leu Glu Lys Leu Gln Gly Thr Leu Phe Ser Thr Glu Glu Glu Pro Ser Lys Leu Leu Val Gln Asn Tyr Arg Ala Leu Gln Pro Leu Asn Gln Arg Met Val Phe Ala Ser Phe Ile Gln Ala Gly Ser Ser Tyr 275 Thr Thr Gly Glu Met Leu Ser Leu Gly Val Gly Ile Leu Val Gly Cys Leu Cys Leu Leu Ala Val Tyr Phe Ile Ala Arg Lys Ile 315 Arg Lys Lys Arg Leu Glu Asn Arg Lys Ser Val Val Phe Thr Ser 325 330 Ala Gln Ala Thr Thr Glu Ala 335

<210> 424

<211> 18

<212> DNA

<213> Artificial

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<220>
<221> Artificial Sequence
<222> 1-18
<223> Synthetic construct.
<400> 424
 gtaaagtcgc tggccagc 18
<210> 425
<211> 18
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-18
<223> Synthetic construct.
<400> 425
 cccgatctgc ctgctgta 18
<210> 426
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 426
 ctgcactgta tggccattat tgtg 24
<210> 427
<211> 45
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-45
<223> Synthetic construct.
<400> 427
 cagaaaccca tgatacccta ctgaacaccg aatcccctgg aagcc 45
<210> 428
<211> 1073
<212> DNA
<213> Homo sapiens
<400> 428
aatttttcac cagagtaaac ttgagaaacc aactggacct tgagtattgt 50
acattttgcc tcgtggaccc aaaggtagca atctgaaaca tgaggagtac 100
gattctactg ttttgtcttc taggatcaac tcggtcatta ccacagctca 150
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aacctgcttt gggactccct cccacaaaac tggctccgga tcagggaaca 200 ctaccaaacc aacagcagtc aaatcaggtc tttccttctt taagtctgat 250 accattaaca cagatgetea caetggggee agatetgeat etgttaaate 300 ctgctgcagg aatgacacct ggtacccaga cccacccatt gaccctggga 350 gggttgaatg tacaacagca actgcaccca catgtgttac caatttttgt 400 cacacaactt ggagcccagg gcactatcct aagctcagag gaattgccac 450 aaatcttcac gagcctcatc atccattcct tgttcccggg aggcatcctg 500 cccaccagtc aggcagggc taatccagat gtccaggatg gaagccttcc 550 agcaggagga gcaggtgtaa atcctgccac ccagggaacc ccagcaggcc 600 gcctcccaac tcccagtggc acagatgacg actttgcagt gaccacccct 650 gcaggcatcc aaaggagcac acatgccatc gaggaagcca ccacagaatc 700 agcaaatgga attcagtaag ctgtttcaaa ttttttcaac taagctgcct 750 cgaatttggt gatacatgtg aatctttatc attgattata ttatggaata 800 gattgagaca cattggatag tcttagaaga aattaattct taatttacct 850 gaaaatattc ttgaaatttc agaaaatatg ttctatgtag agaatcccaa 900 cttttaaaaa caataattca atggataaat ctgtctttga aatataacat 950 tatgctgcct ggatgatatg catattaaaa catatttgga aaactggaaa 1000 aaaaaaaaa aaaaaaaaa aaa 1073

<210> 429

<211> 209

<212> PRT

<213> Homo sapiens

<400> 429

Met Arg Ser Thr Ile Leu Leu Phe Cys Leu Leu Gly Ser Thr Arg
1 5 10 15

Ser Leu Pro Gln Leu Lys Pro Ala Leu Gly Leu Pro Pro Thr Lys
20 25 30

Leu Ala Pro Asp Gln Gly Thr Leu Pro Asn Gln Gln Gln Ser Asn
35 40 45

Gln Val Phe Pro Ser Leu Ser Leu Ile Pro Leu Thr Gln Met Leu
50 55 60

Thr Leu Gly Pro Asp Leu His Leu Leu Asn Pro Ala Ala Gly Met 65 70 75

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Thr Pro Gly Thr Gln Thr His Pro Leu Thr Leu Gly Gly Leu Asn
Val Gln Gln Leu His Pro His Val Leu Pro Ile Phe Val Thr
                 95
                                                         105
Gln Leu Gly Ala Gln Gly Thr Ile Leu Ser Ser Glu Glu Leu Pro
                                    115
Gln Ile Phe Thr Ser Leu Ile Ile His Ser Leu Phe Pro Gly Gly
                125
                                    130
Ile Leu Pro Thr Ser Gln Ala Gly Ala Asn Pro Asp Val Gln Asp
Gly Ser Leu Pro Ala Gly Gly Ala Gly Val Asn Pro Ala Thr Gln
Gly Thr Pro Ala Gly Arg Leu Pro Thr Pro Ser Gly Thr Asp Asp
Asp Phe Ala Val Thr Thr Pro Ala Gly Ile Gln Arg Ser Thr His
                                    190
Ala Ile Glu Glu Ala Thr Thr Glu Ser Ala Asn Gly Ile Gln
                                    205
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<210> 430

<211> 1257

<212> DNA

<213> Homo Sapien

<400> 430

ggagagaggc gcggggtga aaggcgcatt gatgcagcct gcggggcct 50 cggagccgg cggagccaga cgctgaccac gtteetetec teggtetect 100 ccgcctccag ctccgcgctg ccegggagcc gggagccatg cgaccccagg 150 gccccgccgc ctcccgcag cggctccgcg gcctcctgct gctcctgctg 200 ctgcagctgc ccgcgcgtc gagcgcctct gagatcccca aggggaagca 250 aaaggcgcag ctccggcaga gggaggtggt ggacctgtat aatggaatgt 300 gcttacaagg gccagcagga gtgcctggtc gagacgggag ccctggggcc 350 aatgttattc cgggtacacc tgggatccca ggtcgggag gattcaaagg 400 agaaaagggg gaatgtctga gggaaagctt tgaggagtcc tggacaccca 450 actacaagca gtgttcatgg agttcattga attatggcat agatcttggg 500 aaaattgcgg agtgacact tacaaagatg cgttcaaata gtgctctaag 550 agttttgttc agtggctcac ttcggctaaa atgcagaaat gcatgctgtc 600 agcgttggta tttcacattc aatggagctg aatgttcagg acctettccc 650

attgaagcta taatttatt ggaccaagga agccctgaaa tgaattcaac 700 aattaatat catcgcactt cttctgtga aggactttgt gaaggaattg 750 gtgctggatt agtggatgtt gctatctggg ttggcacttg ttcagattac 800 ccaaaaggag atgcttctac tggatggaat tcagttctc gcatcattat 850 tgaaggaacta ccaaaataaa tgctttaatt ttcatttgct acctctttt 900 ttattatgcc ttggaatggt tcacttaaaat gacatttaa ataagtttat 950 gtatacatct gaatgaaaag caaagctaaa tatgttaca gaccaaagtg 1000 tgattcaca ctgttttaa atctagcatt attcatttg cttcaatcaa 1050 aagtggttc aatatttt ttagttggt agaatactt cttcatagtc 1100 acctcttagtat agcatttta aaaaaatata gacgtaca atctttgtac 1200 aatttgtaaa tgttaagaat ttttttata tctgttaaat aaaaattatt 1250 tccaaca 1257

<210> 431

<211> 243

<212> PRT

<213> Homo Sapien

<400> 431

Met Arg Pro Gln Gly Pro Ala Ala Ser Pro Gln Arg Leu Arg Gly
1 5 10 15

Leu Leu Leu Leu Leu Gln Leu Pro Ala Pro Ser Ser Ala
20 25 30

Ser Glu Ile Pro Lys Gly Lys Gln Lys Ala Gln Leu Arg Gln Arg 35 40 45

Glu Val Val Asp Leu Tyr Asn Gly Met Cys Leu Gln Gly Pro Ala
50 55 60

Gly Val Pro Gly Arg Asp Gly Ser Pro Gly Ala Asn Val Ile Pro
65 70 75

Gly Thr Pro Gly Ile Pro Gly Arg Asp Gly Phe Lys Gly Glu Lys
80 85 90

Gly Glu Cys Leu Arg Glu Ser Phe Glu Glu Ser Trp Thr Pro Asn
95 100

Tyr Lys Gln Cys Ser Trp Ser Ser Leu Asn Tyr Gly Ile Asp Leu 110 115 120

Gly Lys Ile Ala Glu Cys Thr Phe Thr Lys Met Arg Ser Asn Ser 125 130 135

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Ala Leu Arq Val Leu Phe Ser Gly Ser Leu Arg Leu Lys Cys Arg
 Asn Ala Cys Cys Gln Arg Trp Tyr Phe Thr Phe Asn Gly Ala Glu
 Cys Ser Gly Pro Leu Pro Ile Glu Ala Ile Ile Tyr Leu Asp Gln
 Gly Ser Pro Glu Met Asn Ser Thr Ile Asn Ile His Arg Thr Ser
 Ser Val Glu Gly Leu Cys Glu Gly Ile Gly Ala Gly Leu Val Asp
 Val Ala Ile Trp Val Gly Thr Cys Ser Asp Tyr Pro Lys Gly Asp
Ala Ser Thr Gly Trp Asn Ser Val Ser Arg Ile Ile Glu Glu
Leu Pro Lys
<210> 432
<211> 18
<212> DNA
<213> Artificial Sequence
<220>
<223> Artificial Sequence
<400> 432
aggacttgcc ctcaggaa 18
<210> 433
<211> 21
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 433
cgcaggacag ttgtgaaaat a 21
<210> 434
<211> 21
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 434
atgacgeteg tecaaggeea c 21
<210> 435
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<211> 19
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 435
 cccacctgta ccaccatgt 19
<210> 436
<211> 24
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 436
 actccaggca ccatctgttc tccc 24
<210> 437
<211> 19
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 437
 aagggctggc attcaagtc 19
<210> 438
<211> 19
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 438
 tgacctggca aaggaagaa 19
<210> 439
<211> 21
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 439
cagccaccct ccagtccaag g 21
<210> 440
<211> 19
<212> DNA
<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 440
gggtcgtgtt ttggagaga 19
<210> 441
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 441
ctggccctca gagcaccaat 20
<210> 442
<211> 25
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 442
tcctccatca cttcccctag ctcca 25
<210> 443
<211> 24
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 443
 ctggcaggag ttaaagttcc aaga 24
<210> 444
<211> 18
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 444
 aaaggacacc gggatgtg 18
<210> 445
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
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 agcgtacact ctctccaggc aaccag 26
<210> 446
<211> 22
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 446
 caattctgga tgaggtggta ga 22
<210> 447
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 447
 caggactgag cgcttgttta 20
<210> 448
<211> 21
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 448
 caaagcgcca agtaccggac c 21
<210> 449
<211> 18
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 449
 ccagacctca gccaggaa 18
<210> 450
<211> 18
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 450
ccctagctga ccccttca 18
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<210> 451
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 451
tctgacaagc agttttctga atc 23
<210> 452
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 452
ctctcccct cccttttcct ttgttt 26
<210> 453
<211> 18
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 453
ctctggtgcc cacagtga 18
<210> 454
<211> 21
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 454
ccatgcctgc tcagccaaga a 21
<210> 455
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 455
caggaaatct ggaaacctac agt 23
<210> 456
<211> 20
<212> DNA
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<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 456
 ccttgaaaag gacccagttt 20
<210> 457
<211> 22
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 457
 atgagtcgca cctgctgttc cc 22
<210> 458
<211> 18
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 458
 tagcagctgc ccttggta 18
<210> 459
<211> 22
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 459
 aacagcaggt gcgactcatc ta 22
<210> 460
<211> 23
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 460
tgctaggcga cgacacccag acc 23
<210> 461
<211> 18
<212> DNA
<213> Artificial Sequence
<220>
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<223> Synthetic oligonucleotide probe
<400> 461
 tggacacgtg gcagtgga 18
<210> 462
<211> 19
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 462
tcatggtctc gtcccattc 19
<210> 463
<211> 27
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 463
caccatttgt ttctctgtct ccccatc 27
<210> 464
<211> 18
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 464
ccggcatcct tggagtag 18
<210> 465
<211> 20
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 465
tccccattag cacaggagta 20
<210> 466
<211> 23
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 466
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aggetettge etgteetget get 23
<210> 467
<211> 18
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 467
 gcccagagtc ccacttgt 18
<210> 468
<211> 19
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 468
 actgctccgc ctactacga 19
<210> 469
<211> 20
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 469
 aggcatcctc gccgtcctca 20
<210> 470
<211> 19
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 470
aaggccaagg tgagtccat 19
<210> 471
<211> 20
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 471
cgagtgtgtg cgaaacctaa 20
<210> 472
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<211> 24
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 472
 tcagggtcta catcagcctc ctgc 24
<210> 473
<211> 19
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 473
aaggccaagg tgagtccat 19
<210> 474
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 474
cctactgagg agccctatgc 20
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